



Kent W. Blake
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September 30, 2004

RECEIVED

SEP 30 2004

PUBLIC SERVICE
COMMISSION

Elizabeth O'Donnell
Executive Director
Kentucky Public Service Commission
211 Sower Boulevard
Frankfort, Kentucky 40602-0615

RE: *Investigation Into The Membership of Louisville Gas and Electric Company and Kentucky Utilities Company In The Midwest Independent Transmission System Operator, Inc. – Case No. 2003-00266*

Dear Ms. O'Donnell:

Enclosed please find an original and ten (10) copies of pages of Appendix A and Appendix B to Exhibit MJM-2, Mathew J. Morey's Supplemental Cost-Benefit Analysis. These pages were inadvertently omitted from Mr. Morey's Supplemental Testimony filed on September 29, 2004.

Also enclosed please find an original and ten (10) copies of Michael S. Beer's notarized verification.

Should you have any questions concerning the enclosed, please do not hesitate to contact me directly at 502-627-2573.

Sincerely,

Kent W. Blake
Director, Regulatory Initiatives

cc: Parties of Record

Revenues					
Transmission Revenues					
<i>Transmission Revenues</i>	-	(28.04)	(28.04)	(28.04)	(28.04)
Subtotal	-	(28.04)	(28.04)	(28.04)	(28.04)
Off-system Sales Revenue	-	(10.91)	(10.91)	(73.84)	1.87
FTRs					
<i>FTR Revenues (as offset to congestion payments)</i>	-	(74.64)	(74.64)	(74.64)	(74.64)
<i>Share of Net Revenue from FTR Auction</i>	1.58	(8.91)	(8.91)	(8.91)	(8.91)
Subtotal	1.58	(83.54)	(83.54)	(83.54)	(83.54)
Miscellaneous Revenues	-	-	-	-	-
Total Revenues	1.58	(122.49)	(122.49)	(185.42)	(109.72)
Difference in Net Recurring Cost	(2.35)	21.92	50.85	28.73	59.90
Non-recurring Cost (Exit Fee)	(24.81)	(24.81)	(24.81)	(24.81)	(24.81)

Table A.3
Annual and PV of Costs and Revenues: MISO Base Case
(millions of dollars; present value to 2003, 2005-2010)
(Positive numbers are costs; Negative numbers are revenues)

Category	PV 2005 - 2010 (million \$ 2003)	2005	2006	2007	2008	2009	2010
Administrative Costs							
<i>Implementation & Administration</i>	64.79	15.14	14.86	14.89	14.75	14.30	12.88
<i>Ancillary Services Market Administration</i>	0.89			0.28	0.28	0.28	0.28
<i>Other Administrative Costs</i>	-	-	-	-	-	-	-
Subtotal	65.56	15.14	14.86	15.17	15.03	14.58	13.16
Operations Costs							
Generation Costs							
<i>A&G Costs Associated with RTO Status</i>	6.20	1.31	1.35	1.38	1.41	1.45	1.49
Native Load							
<i>Fuel Costs</i>	2,752.05	525.33	610.41	635.90	648.48	647.18	668.33
<i>Fixed O&M Costs</i>	293.56	61.62	61.80	63.86	67.43	70.13	73.50
<i>Variable O&M Costs</i>	101.19	18.64	19.31	21.24	22.71	25.65	31.57
<i>Emission Credit Costs</i>	415.16	103.01	106.10	99.91	94.26	72.56	75.15
<i>Market Purchases</i>	130.34	19.54	20.70	26.24	36.78	41.03	36.59
Subtotal	3,692.30	728.14	818.33	847.15	869.66	856.56	885.14
Off-system Sales							
<i>Fuel Costs</i>	423.63	114.28	104.65	86.52	84.80	80.14	93.97
<i>Variable O&M Costs</i>	12.85	3.34	2.70	2.35	2.55	2.78	3.64
<i>Emission Credit Costs</i>	54.83	18.46	14.81	11.05	10.59	7.86	8.66
<i>Market Purchases</i>	-	-	-	-	-	-	-
Subtotal	491.30	136.08	122.16	99.92	97.94	90.78	106.26
Transmission System Operation Costs							
<i>A&G Costs Associated with RTO Status</i>	6.20	1.31	1.35	1.38	1.41	1.45	1.49
<i>Reliability Coordinator and OASIS Services</i>	-	-	-	-	-	-	-
Subtotal	6.20	1.31	1.35	1.38	1.41	1.45	1.49
Transmission Usage Costs							
<i>Transmission Payments</i>	24.60	6.96	6.02	5.45	4.73	4.71	4.71
<i>Transmission Congestion Payments</i>	78.56	16.65	17.06	17.49	17.93	18.37	18.83
Subtotal	103.16	23.61	23.08	22.94	22.65	23.08	23.54
Uplift Charges							
<i>Schedule 21 Uplift Charges</i>	3.86	0.81	0.83	0.86	0.89	0.91	0.93
<i>Miscellaneous Uplift Costs</i>	2.23	0.50	0.50	0.50	0.50	0.50	0.50
Subtotal	6.09	1.31	1.33	1.36	1.39	1.41	1.43
Legal, Regulatory & Transaction Costs	3.78	0.80	0.82	0.84	0.86	0.88	0.91
Total Costs	4,374.59	907.71	983.27	990.14	1,010.36	990.20	1,033.42
Revenues							

Transmission Revenues							
<i>Transmission Revenues</i>	(46.82)	(12.10)	(10.50)	(10.30)	(9.90)	(9.90)	(9.90)
Subtotal	(46.82)	(12.10)	(10.50)	(10.30)	(9.90)	(9.90)	(9.90)
Off-system Sales Revenue	(728.60)	(217.41)	(180.48)	(142.51)	(140.87)	(129.40)	(154.14)
FTRs							
<i>FTR Revenues (as offset to congestion payments)</i>	(74.64)	(15.81)	(16.21)	(16.61)	(17.03)	(17.46)	(17.89)
<i>Share of Net Revenue from FTR Auction</i>	(8.91)	(2.00)	(2.00)	(2.00)	(2.00)	(2.00)	(2.00)
Subtotal	(83.54)	(17.81)	(18.21)	(18.61)	(19.03)	(19.46)	(19.89)
Miscellaneous Revenues							
Total Revenues	(858.96)	(247.33)	(209.19)	(171.42)	(169.80)	(158.76)	(183.93)
Net Recurring Cost	3,515.63	660.38	774.08	818.72	840.56	831.44	849.49
Exit Fee	-	-	-	-	-	-	-

Table A.4
Annual and PV of Costs and Benefits: PJM RTO Case
(millions of dollars; present value to 2003, 2005-2010)
(Positive numbers are costs; Negative numbers are revenues)

Category	PV 2005 - 2010 (million \$ 2003)	2005	2006	2007	2008	2009	2010
Administrative Costs							
Implementation & Administrative Services Market Administration	75.59	17.12	16.45	15.99	16.79	17.45	18.32
Other Administrative Costs	-	-	-	-	-	-	-
Subtotal	75.59	17.12	16.45	15.99	16.79	17.45	18.32
Operations Costs							
Generation Costs							
A&G Costs Associated with RTO Status	6.20	1.31	1.35	1.38	1.41	1.45	1.49
Native Load							
Fuel Costs	2,752.05	525.33	610.41	635.90	648.48	647.18	668.33
Fixed O&M Costs	293.56	61.62	61.80	63.86	67.43	70.13	73.50
Variable O&M Costs	101.19	18.64	19.31	21.24	22.71	25.65	31.57
Emission Credit Costs	415.16	103.01	106.10	99.91	94.26	72.56	75.15
Market Purchases	130.34	19.54	20.70	26.24	36.78	41.03	36.59
Subtotal	3,692.30	728.14	818.33	847.15	869.66	856.56	885.14
Off-system Sales							
Fuel Costs	423.63	114.28	104.65	86.52	84.80	80.14	93.97
Variable O&M Costs	12.85	3.34	2.70	2.35	2.55	2.78	3.64
Emission Credit Costs	54.83	18.46	14.81	11.05	10.59	7.86	8.66
Market Purchases	-	-	-	-	-	-	-
Subtotal	491.30	136.08	122.16	99.92	97.94	90.78	106.26
Transmission System Operation Costs							
A&G Costs Associated with RTO Membership	6.20	1.31	1.35	1.38	1.41	1.45	1.49
Reliability Coordinator and OASIS Services	-	-	-	-	-	-	-
Subtotal	6.20	1.31	1.35	1.38	1.41	1.45	1.49
Transmission Usage Costs							
Transmission Payments	24.60	6.96	6.02	5.45	4.73	4.71	4.71
Transmission Congestion Payments	78.56	16.65	17.06	17.49	17.93	18.37	18.83
Subtotal	103.16	23.61	23.08	22.94	22.65	23.08	23.54
Uplift Charges							
Schedule 21 Uplift	-	-	-	-	-	-	-

<i>Charges(MISO Case Only)</i>							
<i>Miscellaneous Uplift Costs</i>	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-
Legal, Regulatory & Transaction Costs	3.78	0.80	0.82	0.84	0.86	0.88	0.91
Total Costs	4,403.33	936.78	983.52	989.60	1,010.73	991.65	1,037.15
Revenues							
Transmission Revenues							
<i>Transmission Revenues</i>	(46.82)	(12.10)	(10.50)	(10.30)	(9.90)	(9.90)	(9.90)
Subtotal	(46.82)	(12.10)	(10.50)	(10.30)	(9.90)	(9.90)	(9.90)
Off-system Sales Revenue	(728.60)	(217.41)	(180.48)	(142.51)	(140.87)	(129.40)	(154.14)
FTRs							
<i>FTR Revenues (as offset to congestion payments)</i>	(74.64)	(15.81)	(16.21)	(16.61)	(17.03)	(17.46)	(17.89)
<i>Share of Net Revenue from FTR Auction</i>	(10.49)	(2.33)	(2.34)	(2.35)	(2.37)	(2.38)	(2.39)
Subtotal	(85.13)	(18.14)	(18.54)	(18.97)	(19.40)	(19.84)	(20.28)
Miscellaneous Revenues							
Total Revenues	(860.54)	(247.65)	(209.53)	(171.77)	(170.17)	(159.14)	(184.32)
Net Recurring Cost	3,517.98	660.73	774.00	817.83	840.56	832.52	852.83
Exit Fee	24.81	28.40	-	-	-	-	-

Table A.5
Annual and PV of Costs and Revenues: SPP RTO Case
(millions of dollars; present value to 2003, 2005-2010)
(Positive numbers are costs; Negative numbers are revenues)

Category	PV 2005 - 2010 (million \$ 2003)	2005	2006	2007	2008	2009	2010
Administrative Costs							
<i>Implementation & Administration</i>	30.44	6.43	6.48	6.62	6.95	7.22	7.58
<i>Ancillary Services Market Administration</i>	-	-	-	-	-	-	-
<i>Other Administrative Costs</i>	0.03	0.01	0.01	0.01	0.01	0.01	0.01
Subtotal	30.47	6.43	6.49	6.62	6.95	7.23	7.59
Operations Costs							
Generation Costs							
<i>A&G Costs Associated with SPP RTO Status</i>	4.21	0.89	0.92	0.94	0.96	0.99	1.01
Native Load							
<i>Fuel Costs</i>	2,759.89	525.49	612.50	638.55	651.47	648.98	669.38
<i>Fixed O&M Costs</i>	293.56	61.62	61.80	63.86	67.43	70.13	73.50
<i>Variable O&M Costs</i>	101.28	18.66	19.33	21.25	22.72	25.70	31.57
<i>Emission Credit Costs</i>	416.30	102.84	106.32	100.37	94.92	72.82	75.35
<i>Market Purchases</i>	120.17	19.22	18.18	22.97	33.11	38.30	35.15
Subtotal	3,691.21	727.83	818.13	846.99	869.66	855.94	884.94
Off-system Sales							
<i>Fuel Costs</i>	420.88	113.06	104.19	86.06	84.45	79.72	93.28
<i>Variable O&M Costs</i>	12.77	3.31	2.68	2.33	2.54	2.77	3.62
<i>Emission Credit Costs</i>	54.54	18.25	14.76	11.02	10.59	7.84	8.63
<i>Market Purchases</i>	-	-	-	-	-	-	-
Subtotal	488.19	134.62	121.62	99.42	97.57	90.33	105.53
Transmission System Operation Costs							
<i>A&G Costs Associated with RTO Status</i>	3.80	0.42	0.92	0.94	0.96	0.99	1.01
<i>Reliability Coordinator and OASIS Services</i>	-	-	-	-	-	-	-
Subtotal	3.80	0.42	0.92	0.94	0.96	0.99	1.01
Transmission Usage Costs							
<i>Transmission Payments</i>	9.45	1.34	1.34	1.86	2.72	3.17	2.75
<i>Transmission Congestion Payments</i>	-	-	-	-	-	-	-
Subtotal	9.45	1.34	1.34	1.86	2.72	3.17	2.75
Uplift Charges							
<i>Schedule 21 Uplift Charges(MISO Case Only)</i>	-	-	-	-	-	-	-
<i>Miscellaneous Uplift Costs</i>	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-
Legal, Regulatory & Transaction Costs	2.83	0.60	0.62	0.63	0.65	0.66	0.68

Total Costs	4,254.98	900.54	950.03	957.40	979.48	959.30	1,003.51
Revenues (note revenues will be negative numbers)							
Transmission Revenues							
<i>Transmission Revenues</i>	(18.78)	(5.10)	(4.00)	(4.00)	(4.00)	(4.00)	(4.00)
Subtotal	(18.78)	(5.10)	(4.00)	(4.00)	(4.00)	(4.00)	(4.00)
Off-system Sales Revenue	(717.69)	(213.14)	(178.25)	(140.43)	(139.18)	(127.51)	(152.04)
FTRs							
<i>FTR Revenues (as offset to congestion payments)</i>	-	-	-	-	-	-	-
<i>Share of Net Revenue from FTR Auction</i>	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-
Miscellaneous Revenues	-	-	-	-	-	-	-
Total Revenues	(736.47)	(218.24)	(182.25)	(144.43)	(143.18)	(131.51)	(156.04)
Net Recurring Cost	3,493.71	653.89	767.78	812.97	836.29	827.79	847.48
Exit Fee	24.81	28.40	-	-	-	-	-

Table A.6
Annual and PV of Costs and Revenues: TORC Baseline Scenario
(millions of dollars; present value to 2003, 2005-2010)
(Positive numbers are costs; Negative numbers are revenues)

Category	PV 2005 - 2010 (million \$ 2003)	2005	2006	2007	2008	2009	2010
Administrative Costs							
<i>Implementation & Administration</i>	-	-	-	-	-	-	-
<i>Ancillary Services Market Administration</i>	-	-	-	-	-	-	-
<i>Other Administrative Costs</i>	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-
Operations Costs							
Generation Costs							
<i>A&G Costs Associated with RTO Status</i>	4.21	0.89	0.92	0.94	0.96	0.99	1.01
Native Load							
<i>Fuel Costs</i>	2,759.89	525.49	612.50	638.55	651.47	648.98	669.38
<i>Fixed O&M Costs</i>	293.56	61.62	61.80	63.86	67.43	70.13	73.50
<i>Variable O&M Costs</i>	101.28	18.66	19.33	21.25	22.72	25.70	31.57
<i>Emission Credit Costs</i>	416.30	102.84	106.32	100.37	94.92	72.82	75.35
<i>Market Purchases</i>	120.17	19.22	18.18	22.97	33.11	38.30	35.15
Subtotal	3,691.21	727.83	818.13	846.99	869.66	855.94	884.94
Off-system Sales							
<i>Fuel Costs</i>	420.88	113.06	104.19	86.06	84.45	79.72	93.28
<i>Variable O&M Costs</i>	12.77	3.31	2.68	2.33	2.54	2.77	3.62
<i>Emission Credit Costs</i>	54.54	18.25	14.76	11.02	10.59	7.84	8.63
<i>Market Purchases</i>	-	-	-	-	-	-	-
Subtotal	488.19	134.62	121.62	99.42	97.57	90.33	105.53
Transmission System Operation Costs							
<i>A&G Costs Associated with RTO Status</i>	3.80	0.42	0.92	0.94	0.96	0.99	1.01
<i>Reliability Coordinator and OASIS Services</i>	2.48	0.53	0.54	0.55	0.57	0.58	0.59
Subtotal	6.28	0.95	1.45	1.49	1.53	1.57	1.60
Transmission Usage Costs							
<i>Transmission Payments</i>	9.45	1.34	1.34	1.86	2.73	3.17	2.75
<i>Transmission Congestion Payments</i>	-	-	-	-	-	-	-
Subtotal	9.45	1.34	1.34	1.86	2.73	3.17	2.75
Uplift Charges							
<i>Schedule 21 Uplift Charges(MISO Case Only)</i>	-	-	-	-	-	-	-
<i>Miscellaneous Uplift Costs</i>	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-
Legal, Regulatory & Transaction Costs	1.89	0.40	0.41	0.42	0.43	0.44	0.45
Total Costs	4,226.05	894.43	943.87	951.12	972.88	952.43	996.29

Revenues (note revenues will be negative numbers)							
Transmission Revenues							
<i>Transmission Revenues</i>	(18.78)	(5.10)	(4.00)	(4.00)	(4.00)	(4.00)	(4.00)
Subtotal	(18.78)	(5.10)	(4.00)	(4.00)	(4.00)	(4.00)	(4.00)
Off-system Sales Revenue	(717.69)	(213.14)	(178.25)	(140.43)	(139.18)	(127.51)	(152.04)
FTRs							
<i>FTR Revenues (as offset to congestion payments)</i>	-	-	-	-	-	-	-
<i>Share of Net Revenue from FTR Auction</i>	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-
Miscellaneous Revenues	-	-	-	-	-	-	-
Total Revenues	(736.47)	(218.24)	(182.25)	(144.43)	(143.18)	(131.51)	(156.04)
Net Recurring Cost	3,464.78	647.78	761.63	806.69	829.70	820.92	840.26
Exit Fee	24.81	28.40	-	-	-	-	-

Table A.7
Annual and PV of Costs and Revenues: TORC Low-Transfer Scenario
(millions of dollars; present value to 2003, 2005-2010)
(Positive numbers are costs; Negative numbers are revenues)

Category	PV 2005 - 2010 (million \$ 2003)	2005	2006	2007	2008	2009	2010
Administrative Costs							
<i>Implementation & Administration</i>	-	-	-	-	-	-	-
<i>Ancillary Services Market Administration</i>	-	-	-	-	-	-	-
<i>Other Administrative Costs</i>	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-
Operations Costs							
Generation Costs							
<i>A&G Costs Associated with RTO Status</i>	4.21	0.89	0.92	0.94	0.96	0.99	1.01
Native Load							
<i>Fuel Costs</i>	2,760.66	525.55	612.61	638.58	651.68	649.33	669.72
<i>Fixed O&M Costs</i>	293.56	61.62	61.80	63.86	67.43	70.13	73.50
<i>Variable O&M Costs</i>	101.46	18.91	19.46	21.29	22.71	25.57	31.45
<i>Emission Credit Costs</i>	412.85	101.30	105.41	100.02	94.08	72.30	75.10
<i>Market Purchases</i>	120.21	19.28	18.20	22.98	33.01	38.35	35.15
Subtotal	3,688.75	726.66	817.48	846.72	868.91	855.68	884.92
Off-system Sales							
<i>Fuel Costs</i>	388.29	100.20	96.61	82.92	78.26	73.19	86.84
<i>Variable O&M Costs</i>	11.80	2.98	2.51	2.25	2.34	2.52	3.35
<i>Emission Credit Costs</i>	49.77	15.99	13.58	10.59	9.70	7.12	7.99
<i>Market Purchases</i>		-	-	-	-	-	-
Subtotal	449.86	119.17	112.70	95.77	90.30	82.83	98.18
Transmission System Operation Costs							
<i>A&G Costs Associated with RTO Status</i>	3.80	0.42	0.92	0.94	0.96	0.99	1.01
<i>Reliability Coordinator and OASIS Services</i>	2.48	0.53	0.54	0.55	0.57	0.58	0.59
Subtotal	6.28	0.95	1.45	1.49	1.53	1.57	1.60
Transmission Usage Costs							
<i>Transmission Payments</i>	9.45	1.34	1.34	1.86	2.72	3.17	2.75
<i>Transmission Congestion Payments</i>	-	-	-	-	-	-	-
Subtotal	9.45	1.34	1.34	1.86	2.72	3.17	2.75
Uplift Charges							
<i>Schedule 21 Uplift Charges(MISO Case</i>	-	-	-	-	-	-	-
<i>Only) Miscellaneous Uplift Costs</i>	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-
Legal, Regulatory & Transaction Costs	1.89	0.40	0.41	0.42	0.43	0.44	0.45
Total Costs	4,185.25	877.81	934.30	947.20	964.86	944.67	988.92

Revenues							
Transmission Revenues							
<i>Transmission Revenues</i>	(18.78)	(5.10)	(4.00)	(4.00)	(4.00)	(4.00)	(4.00)
Subtotal	(18.78)	(5.10)	(4.00)	(4.00)	(4.00)	(4.00)	(4.00)
Off-system Sales Revenue	(654.76)	(188.51)	(163.50)	(133.16)	(127.09)	(115.49)	(140.47)
FTRs							
<i>FTR Revenues (as offset to congestion payments)</i>	-	-	-	-	-	-	-
<i>Share of Net Revenue from FTR Auction</i>	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-
Miscellaneous Revenues	-	-	-	-	-	-	-
Total Revenues	(673.54)	(193.61)	(167.50)	(137.16)	(131.09)	(119.49)	(144.47)
Net Recurring Cost	3,486.90	655.80	766.80	810.04	833.76	825.18	844.45
Exit Fee	24.81	28.40	-	-	-	-	-

Table A.8
Annual and PV of Costs and Revenues: TORC High-Transfer Scenario
(millions of dollars; present value to 2003, 2005-2010)
(Positive numbers are costs; Negative numbers are revenues)

Category	PV 2005 - 2010 (million \$ 2003)	2005	2006	2007	2008	2009	2010
Administrative Costs							
<i>Implementation & Administration</i>	-	-	-	-	-	-	-
<i>Ancillary Services Market Administration</i>	-	-	-	-	-	-	-
<i>Other Administrative Costs</i>	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-
Operations Costs							
Generation Costs							
<i>A&G Costs Associated with RTO Status</i>	4.21	0.89	0.92	0.94	0.96	0.99	1.01
Native Load							
<i>Fuel Costs</i>	2,752.07	525.30	610.52	635.85	648.41	647.22	668.36
<i>Fixed O&M Costs</i>	293.56	61.62	61.80	63.86	67.43	70.13	73.50
<i>Variable O&M Costs</i>	101.20	18.64	19.31	21.23	22.70	25.68	31.57
<i>Emission Credit Costs</i>	415.19	102.92	106.07	99.89	94.39	72.61	75.18
<i>Market Purchases</i>	129.87	19.48	20.49	26.19	36.78	40.80	36.52
Subtotal	3,691.90	727.97	818.20	847.02	869.72	856.44	885.12
Off-system Sales							
<i>Fuel Costs</i>	422.85	114.11	104.45	86.21	84.69	80.27	93.59
<i>Variable O&M Costs</i>	12.84	3.34	2.69	2.34	2.55	2.79	3.63
<i>Emission Credit Costs</i>	54.77	18.43	14.79	11.02	10.60	7.88	8.65
<i>Market Purchases</i>		-	-	-	-	-	-
Subtotal	490.46	135.88	121.94	99.57	97.83	90.94	105.88
Transmission System Operation Costs							
<i>A&G Costs Associated with RTO Status</i>	3.80	0.42	0.92	0.94	0.96	0.99	1.01
<i>Reliability Coordinator and OASIS Services</i>	2.48	0.53	0.54	0.55	0.57	0.58	0.59
Subtotal	6.28	0.95	1.45	1.49	1.53	1.57	1.60
Transmission Usage Costs							
<i>Transmission Payments</i>	10.23	1.35	1.51	2.12	3.03	3.37	2.86
<i>Transmission Congestion Payments</i>	-	-	-	-	-	-	-
Subtotal	10.23	1.35	1.51	2.12	3.03	3.37	2.86
Uplift Charges							
<i>Schedule 21 Uplift Charges(MISO Case Only)</i>	-	-	-	-	-	-	-
<i>Miscellaneous Uplift Costs</i>	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-
Legal, Regulatory & Transaction Costs	1.89	0.40	0.41	0.42	0.43	0.44	0.45
Total Costs	4,229.78	895.84	944.43	951.56	973.51	953.74	996.93

Revenues							
Transmission Revenues							
<i>Through and Out Revenues</i>	-	-	-				
<i>Transmission Revenues</i>	(18.78)	(5.10)	(4.00)	(4.00)	(4.00)	(4.00)	(4.00)
Subtotal	(18.78)	(5.10)	(4.00)	(4.00)	(4.00)	(4.00)	(4.00)
Off-system Sales Revenue	(730.46)	(217.64)	(180.98)	(142.65)	(141.55)	(130.24)	(154.32)
FTRs							
<i>FTR Revenues (as offset to congestion payments)</i>	-	-	-	-	-	-	-
<i>Share of Net Revenue from FTR Auction</i>	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-
Miscellaneous Revenues	-	-	-	-	-	-	-
Total Revenues	(749.24)	(222.74)	(184.98)	(146.65)	(145.55)	(134.24)	(158.32)
Net Recurring Cost	3,455.73	644.70	759.45	804.91	827.96	819.49	838.61
Exit Fee	24.81	28.40	-	-	-	-	-

Appendix B
Work Papers to Accompany the Supplemental Investigation

APPENDIX B: Work Papers to Accompany Supplemental Testimony of Mathew J. Morey

VARIOUS INPUTS USED IN THE COST BENEFIT STUDY

Discount Rate 7.0%
 Inflation Rate 2.5%
 Base Year 2003

Yrly Admin Charges (millions \$)
 MISO 16
 PJM 20
 SPP 12

MISO Rate Sensitivity Case 10%

FTR Revenue Shortfall % 5%

Average Growth Rate of Combined Companies forecast 2.04%

APPENDIX B: Work Papers to Accompany Supplemental Testimony of Mathew J. Morey

Administrative Charges (\$/MWh)	2003	2004	2005	2006	2007	2008	2009	2010
MISO								
Schedule 10			0.15	0.15	0.15	0.148	0.134	0.13
Schedule 16			0.058	0.059	0.059	0.056	0.056	0.046
Schedule 17			0.077	0.073	0.072	0.069	0.068	0.056
All Schedules			0.285	0.282	0.281	0.273	0.258	0.232
PJM (w/o mkt integration)	0.5	0.54	0.56	0.53	0.53	0.54325	0.55683125	0.570752031
PJM (w/ mkt integration)	0.5	0.54	0.42	0.41	0.4	0.41	0.42	0.43
SPP	0.15	0.15	0.15759375	0.161533594	0.165571934	0.169711232	0.173954013	0.178302863
(all nominal dollars)								

integration means expansion of PJM footprint to include AEP, ComEd, DP&L and Dominion rates exclude FERC fees
 SPP rate grows with inflation
 PJM w/o integration grows with inflation after 2007
 PJM w integration grows with inflation after 2007
 MISO schedules drawn from Response to Interrogatory Question No. 8
 Note: SPP currently has a cap on administrative charges of 20 cents/MWh

Reliability Coordination and OASIS Services Costs applicable to Standalone option only	2005	2006	2007	2008	2009	2010
	0.5	0.5	(millions 2004\$) 0.5	0.5	0.5	0.5

APPENDIX B: Work Papers to Accompany Supplemental Testimony of Mathew J. Morey

Load and Energy Forecasts, LG&E, KU and Combined

Combined Annual Peak Load Forecast

	Year							
	2003	2004	2005	2006	2007	2008	2009	2010
Summer Peak MW		6,532	6,696	6,811	6,951	7,125	7,272	7,383
Winter Peak MW		5,513	5,647	5,754	5,896	5,974	6,142	6,223

Source: Merged 2005 Forecast.xls provided by the Companies, August 6 2004
weather normalized forecasts

Combined Annual Net Energy for Load Forecast

	Year							
	2003	2004	2005	2006	2007	2008	2009	2010
GWh	33,087	33,689	34,468	35,143	35,954	36,797	37,462	38,121
%delta		1.82%	2.31%	1.96%	2.31%	2.34%	1.81%	1.76%
								2.04%

source: Merged 2005 Forecast.xls

LG&E Annual Peak Load Forecast

	Year							
	2003	2004	2005	2006	2007	2008	2009	2010
Summer Peak MW		2,579	2,629	2,673	2,705	2,756	2,800	2,850
Winter Peak MW		1,770	1,805	1,835	1,857	1,892	1,922	1,957

KU Annual Peak Load Forecast

	Year							
	2003	2004	2005	2006	2007	2008	2009	2010
Summer Peak MW		3,967	4,067	4,153	4,275	4,387	4,472	4,549
Winter Peak MW		3,747	3,842	3,923	4,039	4,145	4,225	4,297

APPENDIX B: Work Papers to Accompany Supplemental Testimony of Mathew J. Morey

LG&E Annual Net Energy for Load Forecast					
	2003	2004	2005	Year	
need actual 2003		12,417	12,657	2006	2010
				12,870	13,722
				13,024	13,478
				13,266	13,722

GWh

KU Annual Net Energy for Load Forecast					
	2003	2004	2005	Year	
need actual 2003		21,273	21,812	2006	2010
				22,273	24,399
				22,930	23,983
				23,530	24,399

GWh

APPENDIX B: Work Papers to Accompany Supplemental Testimony of Mathew J. Morey

MISO Statistics

Ten Year Projection Actual									
2002	2003	2004	2005	2006	2007	2008	2009	2010	
Peak Hr Demand	111,000	112,887	114,806	116,758	118,743	120,761	122,814	124,902	
Summer-MW									

1.70% assumed growth rate

Net Energy for Load (for purposes of including in Schedule 10 charges)									
2002	2003	2004	2005	2006	2007	2008	2009	2010	
		570,001,263	581,401,289	593,029,314	604,889,901	616,987,699	629,327,453	641,914,002	

Ancillary Market Administration Service Charges									
2002	2003	2004	2005	2006	2007	2008	2009	2010	
					0.28	0.28	0.28	0.28	

Note: ancillary market administration service costs adopted from previous study, left unchanged

Source for MISO Net Energy for Load

all years Attachment to LGE/KU #44: Witness Holstein, page 25, Total Midwest ISO Projection, Total for computing Schedule 10 charges

Absolute Totals									
2002	2003	2004	2005	2006	2007	2008	2009	2010	
		717,144,243	731,487,128	746,116,870	761,039,208	776,259,992	791,785,192	807,620,896	

Source for MISO Net Energy for Load

all years Attachment to LGE/KU #44: Witness Holstein, page 25, Total Midwest ISO Projection, Absolute Totals

APPENDIX B: Work Papers to Accompany Supplemental Testimony of Mathew J. Morey

PJM Statistics

Assumed Net Revenue from FTR Auctions (million \$)

2005	2006	2007	2008	2009	2010
25	25	25	25	25	25

Peak Load

	2004	2005	2006	2007	2008	2009	2010
WN Summ	65,200	66,478	67,654	68,787	69,935	71,015	72,178
	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
WN Winter	52,687	53,622	54,453	55,272	56,082	56,879	57,700

1.7% summer growth rate assumed:

<http://www.pjm.com/planning/res-adequacy/downloads/2004-load-report.pdf>

1.5% winter growth rate assumed

<http://www.pjm.com/planning/res-adequacy/downloads/2004-load-report.pdf>

Net Energy for Load (GWh)

	2004	2005	2006	2007	2008	2009	2010
325171	330,898	335,792	341,083	346,199	351,719	356,142	361,306
growth rate	0.018	0.015	0.016	0.015	0.016	0.013	0.014

1.4% overall growth rate

<http://www.pjm.com/planning/res-adequacy/downloads/2004-load-report.pdf>

APPENDIX B: Work Papers to Accompany Supplemental Testimony of Mathew J. Morey

SPP Statistics (million \$) 0.006
Annual Membership Fees

	Summer Demand (MW)	Winter Demand (MW)	Annual Energy (GWh)
1988 (4-1-99)	37,724	27,847	183,102
1989 (4-1-00)	39,079	27,963	179,409
2000 (4-1-01)	40,199	30,576	193,661
2001 (4-1-02)	40,273	29,614	193,590
2002 (4-1-03)	39,688	30,187	196,103
%/Year	1.25%	2.0%	1.50%

Administrative Costs
Operating Costs (million \$)
Capital costs (million \$)
Total Costs (million \$)
Implied Rate: \$/MWh

2004	39.00	15.00	54.00	0.2665
2005	42.00	16.00	58.00	0.2806
2006	44.00	13.00	57.00	0.2756
2007	45.10	13.33	58.43	0.2767
2008	46.23	13.66	59.89	0.2784
2009	47.38	14.00	61.38	0.2800
2010	48.57	14.35	62.92	0.2830

operating and capital costs after 2006 assumed to grow at 2.5% per annum

	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Next Year 2004												
Peak Hr Demand MW	29,556	27,995	26,492	26,228	31,896	37,717	40,848	40,889	36,648	28,298	26,673	29,404
Net Energy-GWh	16,785	14,989	15,392	14,278	15,759	18,547	21,607	21,113	17,231	15,198	14,368	16,739
Ten Year Projection Actual												
Peak Hr Demand	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	
Summer-MW	39688	40664	41345	41826	42158	43012	43855	44736	45606	46500	47361	
Ten Year Projection Actual												
Peak Hr Demand	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	
Winter-MW	30,187	29,891	30,555	31,069	31,366	31,998	32,663	33,048	33,989	34,625	35,228	
Ten Year Projection Actual												
Net Annual Energy	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	
Annual-GWh	194,876	199,475	202,606	206,712	206,849	211,165	215,140	219,190	222,337	225,889	360,237	

APPENDIX B: Work Papers to Accompany Supplemental Testimony of Mathew J. Morey

Energy and Load Shares for Change Cases

	2005	2006	2007	2008	2009	2010
--	------	------	------	------	------	------

Summer Peak Load Shares: Combined Companies

Base Case: MISO	LG&E/KU	5.83%	5.83%	5.85%	5.90%	5.92%	5.91%
Change Case 1: PJM	LG&E/KU	9.15%	9.15%	9.18%	9.25%	9.29%	9.28%
Change Case 2: SPP	LG&E/KU	13.80%	13.91%	13.91%	13.98%	13.98%	13.93%

	2005	2006	2007	2008	2009	2010
--	------	------	------	------	------	------

Energy Shares: Combined Companies

Base Case: MISO	LG&E/KU	5.93%	5.93%	5.81%	5.83%	5.95%	5.94%
Change Case 1: PJM	LG&E/KU	9.31%	9.34%	9.41%	9.47%	9.52%	9.54%
Change Case 2: SPP	LG&E/KU	14.29%	14.52%	14.55%	14.61%	14.60%	14.64%

	2005	2006	2007	2008	2009	2010
--	------	------	------	------	------	------

Summer Peak Load Shares: LG&E

Base Case: MISO	2.29%	2.29%	2.28%	2.28%	2.28%	2.28%
Change Case 1: PJM	3.80%	3.80%	3.78%	3.79%	3.79%	3.80%
Change Case 2: SPP	5.91%	5.96%	5.92%	5.91%	5.89%	5.88%

	2005	2006	2007	2008	2009	2010
--	------	------	------	------	------	------

Energy Shares: LG&E

Base Case: MISO	2.18%	2.17%	2.15%	2.15%	2.14%	2.14%
Change Case 1: PJM	3.42%	3.42%	3.41%	3.41%	3.42%	3.44%
Change Case 2: SPP	5.25%	5.32%	5.27%	5.27%	5.25%	5.27%

APPENDIX B: Work Papers to Accompany Supplemental Testimony of Mathew J. Morey

	2005	2006	2007	2008	2009	2010
Summer Peak Load Shares: KU						
Base Case: MISO	3.54%	3.56%	3.60%	3.63%	3.64%	3.64%
Change Case 1: PJM	5.77%	5.78%	5.85%	5.90%	5.92%	5.93%
Change Case 2: SPP	8.86%	8.97%	9.04%	9.09%	9.09%	9.07%

	2005	2006	2007	2008	2009	2010
Energy Shares: KU						
Base Case: MISO	3.75%	3.76%	3.79%	3.81%	3.81%	3.80%
Change Case 1: PJM	5.89%	5.92%	6.00%	6.06%	6.09%	6.11%
Change Case 2: SPP	9.04%	9.20%	9.28%	9.34%	9.34%	9.37%

APPENDIX B: Work Papers to Accompany Supplemental Testimony of Mathew J. Morey

Admin & General Costs

		PV 2005 - 2010 (million \$ 2003)	2005	2006	2007	2008	2009	2010	(millions\$)
									Inputs
RTO	Generation A&G	6.20	1.313281	1.346113	1.379766	1.41426	1.449617	1.485857	1.25
RTO	Trans A&G	6.20	1.313281	1.346113	1.379766	1.41426	1.449617	1.485857	
Standalon	Generation A&G	4.21	0.893031	0.915357	0.938241	0.961697	0.985739	1.010383	0.85
Standalon	Trans A&G	3.80	0.42025	0.915357	0.938241	0.961697	0.985739	1.010383	0.4

Note:

APPENDIX B: Work Papers to Accompany Supplemental Testimony of Mathew J. Morey

Net Congestion Payment (\$million) (from spreadsheet Generation_Load_LMP_Base.xls)

	2004	2005	2006	2007	2008	2009	2010
\$	15.84	16.65	17.06	17.49	17.93	18.37	18.83

APPENDIX B: Work Papers to Accompany Supplemental Testimony of Mathew J. Morey

Legal Regulatory and Transaction Costs

All other costs assumed to rise at rate of inflation

	NPV 2005 - 2010 (million \$ 2003)	2005	2006	2007	2008	2009	2010
MISO Base Case							
<i>FERC Fees</i>	\$4.10	0.86	0.86	0.86	0.86	0.86	0.86
<i>Other Costs</i>	\$4.04	0.8	0.82	0.84	0.86	0.88	0.91
Total	\$8.14	1.66	1.68	1.70	1.72	1.74	1.77

Standalone Option

<i>FERC Fees</i>	\$3.19	0.67	0.67	0.67	0.67	0.67	0.67
<i>Other Costs</i>	\$2.02	0.4	0.41	0.42	0.43	0.44	0.45
Total							

Note

FERC fees not included in analysis this round.

APPENDIX B: Work Papers to Accompany Supplemental Testimony of Mathew J. Morey

Estimation of LG&E/KU Exit Fee--Effective Exit 12/31/2004

Latest Figures from MISO July Information Filing for Market Startup Costs
This covers schedule 16 & 17 Capital costs (in \$ million)

\$	270	\$	270	
\$	15	\$	15	assumed additional capital expenses to comply with FERC TEMT order
\$	285	\$	285	
 Capital Expenditures for Schedule 10 Capital Expenditures for Schedule 10				
	180		180	
	15		15	assumed additional capital expenses to comply with FERC TEMT order
	7		7	assumed additional for joint and common market
	202		202	
\$	487	\$	487	Total
			28.40	LGE pro rata share

APPENDIX B: Work Papers to Accompany Supplemental Testimony of Mathew J. Morey

Estimation of Schedule 10, 16 and 17 Charges for the Period 2005-2010

	ENERGY (GWH)				
	KU	LG&E	OSS	Combined	KU+LGE
2005	21,812	12,657	6,302	40,770	34,468
2006	22,273	12,870	4,975	40,118	35,143
2007	22,930	13,024	4,014	39,968	35,954
2008	23,530	13,266	4,143	40,939	36,797
2009	23,983	13,478	4,064	41,525	37,462
2010	24,399	13,722	4,416	42,537	38,121

	Summer CPeak Load (MW)		
	KU	LG&E	Combined
2005	4,067	2,629	6,696
2006	4,153	2,673	6,826
2007	4,275	2,705	6,980
2008	4,387	2,756	7,143
2009	4,472	2,756	7,228
2010	4,549	2,850	7,399

Miscellaneous Uplift Charges (millions of dollars)

2005	0.5
2006	0.5
2007	0.5
2008	0.5
2009	0.5
2010	0.5
Totals	

APPENDIX B: Work Papers to Accompany Supplemental Testimony of Mathew J. Morey

MISO's Rates MISO Response to LG&E/KU 8/18/04 Data Request Item No.8.

Year	Sch. 10	Sch. 16	Sch. 17
2005	0.15	0.058	0.077
2006	0.15	0.059	0.073
2007	0.15	0.059	0.072
2008	0.148	0.056	0.069
2009	0.134	0.056	0.068
2010	0.13	0.046	0.056

Schedule 10 Charges

	Rate		KU		LG&E		OSS		COMBINED
2005	0.15	\$	3,271,735	\$	1,898,513	\$	945,240	\$	6,115,487
2006	0.15	\$	3,340,977	\$	1,930,474	\$	746,225	\$	6,017,675
2007	0.15	\$	3,439,464	\$	1,953,624	\$	602,048	\$	5,995,136
2008	0.148	\$	3,482,473	\$	1,963,431	\$	613,105	\$	6,059,009
2009	0.134	\$	3,213,782	\$	1,806,065	\$	544,544	\$	5,564,391
2010	0.13	\$	3,171,893	\$	1,783,890	\$	574,063	\$	5,529,846
Total		\$	19,920,323	\$	11,335,997	\$	4,025,224	\$	35,281,544

Schedule 16 Charges

95% FTR Annual Peak

	Rate		KU		LG&E		OSS		COMBINED
2005	0.058	\$	1,963,043	\$	1,268,955		0	\$	3,231,998
2006	0.059	\$	2,039,115	\$	1,312,438			\$	3,351,552
2007	0.059	\$	2,099,016	\$	1,328,150			\$	3,427,166
2008	0.056	\$	2,044,482	\$	1,284,384			\$	3,328,867
2009	0.056	\$	2,084,095	\$	1,284,384			\$	3,368,479
2010	0.046	\$	1,741,412	\$	1,091,014			\$	2,832,426
Total		\$	11,971,164	\$	7,569,325	\$	-	\$	19,540,489

Schedule 17 Charges

	Rate		KU		LG&E		OSS		COMBINED
2005	0.077	\$	3,358,981	\$	1,949,140	\$	485,223	\$	5,793,344
2006	0.073	\$	3,251,884	\$	1,878,994	\$	363,163	\$	5,494,041
2007	0.072	\$	3,301,885	\$	1,875,479	\$	288,983	\$	5,466,347
2008	0.069	\$	3,247,171	\$	1,830,767	\$	285,839	\$	5,363,777
2009	0.068	\$	3,261,749	\$	1,833,021	\$	276,336	\$	5,371,106
2010	0.056	\$	2,732,708	\$	1,536,890	\$	247,289	\$	4,516,886
Total		\$	19,154,378	\$	10,904,292	\$	1,946,832	\$	32,005,502

	Total		KU		LG&E		OSS		COMBINED
2005	\$		8.59	\$	5.12	\$	1.43	\$	15.14
2006	\$		8.63	\$	5.12	\$	1.11	\$	14.86
2007	\$		8.84	\$	5.16	\$	0.89	\$	14.89
2008	\$		8.77	\$	5.08	\$	0.90	\$	14.75
2009	\$		8.56	\$	4.92	\$	0.82	\$	14.30
2010	\$		7.65	\$	4.41	\$	0.82	\$	12.88
Totals	\$		51.05	\$	29.81	\$	5.97	\$	86.83

APPENDIX B: Work Papers to Accompany Supplemental Testimony of Mathew J. Morey

MISO Rates Sensitivity Case

Assumption: MISO Rates Are 10% than 2004 projections, beginning 2006

Sch 10 Ba: Year		Sch. 10	Sch. 16	Sch. 17
0.15	2005	0.15	0.0580	0.0770
0.165	2006	0.15	0.0649	0.0803
0.165	2007	0.15	0.0649	0.0792
0.1628	2008	0.15	0.0616	0.0759
0.1474	2009	0.15	0.0616	0.0748
0.143	2010	0.14	0.0506	0.0616

Schedule 10 Charges

	Rate		KU		LG&E		OSS		COMBINED
2005	0.15	\$	3,271,735	\$	1,898,513	\$	945,240	\$	6,115,487
2006	0.15	\$	3,340,977	\$	1,930,474	\$	746,225	\$	6,017,675
2007	0.15	\$	3,439,464	\$	1,953,624	\$	602,048	\$	5,995,136
2008	0.15	\$	3,529,533	\$	1,989,964	\$	621,390	\$	6,140,888
2009	0.1474	\$	3,535,161	\$	1,986,672	\$	598,998	\$	6,120,831
2010	0.143	\$	3,489,082	\$	1,962,279	\$	631,469	\$	6,082,831
Total		\$	20,605,951	\$	11,721,525	\$	4,145,370	\$	36,472,846

Schedule 16 Charges 95% FTR Annual Peak

	Rate		KU		LG&E		OSS		COMBINED
2005	0.058	\$	1,963,043	\$	1,268,955		0	\$	3,231,998
2006	0.0649	\$	2,243,026	\$	1,443,681			\$	3,686,708
2007	0.0649	\$	2,308,918	\$	1,460,965			\$	3,769,883
2008	0.0616	\$	2,248,931	\$	1,412,823			\$	3,661,753
2009	0.0616	\$	2,292,505	\$	1,412,823			\$	3,705,327
2010	0.0506	\$	1,915,553	\$	1,200,116			\$	3,115,669
Total		\$	12,971,976	\$	8,199,362	\$	-	\$	21,171,338

Schedule 17 Charges

	Rate		KU		LG&E		OSS		COMBINED
2005	0.077	\$	3,358,981	\$	1,949,140	\$	485,223	\$	5,793,344
2006	0.0803	\$	3,577,072	\$	2,066,894	\$	399,479	\$	6,043,445
2007	0.0792	\$	3,632,074	\$	2,063,027	\$	317,881	\$	6,012,982
2008	0.0759	\$	3,571,888	\$	2,013,844	\$	314,423	\$	5,900,155
2009	0.0748	\$	3,587,924	\$	2,016,324	\$	303,969	\$	5,908,217
2010	0.0616	\$	3,005,979	\$	1,690,579	\$	272,018	\$	4,968,575
Total		\$	20,733,917	\$	11,799,807	\$	2,092,993	\$	34,626,718

	Total		KU		LG&E		OSS		COMBINED
2005	\$		8.59	\$	5.12	\$	1.43	\$	15.14
2006	\$		9.16	\$	5.44	\$	1.15	\$	15.75
2007	\$		9.38	\$	5.48	\$	0.92	\$	15.78
2008	\$		9.35	\$	5.42	\$	0.94	\$	15.70
2009	\$		9.42	\$	5.42	\$	0.90	\$	15.73
2010	\$		8.41	\$	4.85	\$	0.90	\$	14.17
Totals	\$		54.31	\$	31.72	\$	6.24	\$	92.27

APPENDIX B: Work Papers to Accompany Supplemental Testimony of Mathew J. Morey

Transmission Payments and Revenues

IN- MISO	2005	2006	2007	2008	2009	2010
XM Payment	7.0	6.0	5.5	4.7	4.7	4.7
XM Revenue	12.1	10.5	10.3	9.9	9.9	9.9

IN PJM	2005	2006	2007	2008	2009	2010
XM Payment	7.0	6.0	5.5	4.7	4.7	4.7
XM Revenue	12.1	10.5	10.3	9.9	9.9	9.9

IN SPP	Tx payments and revenues listed here correspond to LGE Staff Case #2: SPP Low-Transfer Case					
XM Payment	1.34	1.34	1.86	2.72	3.17	2.75
XM Revenue	5.1	4.0	4.0	4.0	4.0	4.0

Standalone	Tx payments and revenues listed here correspond to LGE Staff Case #2: TORC Low-Transfer Scenario					
XM Payment	1.34	1.34	1.86	2.72	3.17	2.75
XM Revenue	5.1	4.0	4.0	4.0	4.0	4.0

IN SPP	Tx payments and revenues associated with LGE Staff Case #3: Baseline Case (used for SPP and TORC Baseline)					
XM Payment	1.34	1.34	1.86	2.73	3.17	2.75
XM Revenue	5.1	4.0	4.0	4.0	4.0	4.0

Standalone	Tx payments and revenues associated with LGE Staff Case #3: Baseline Case (used for SPP and TORC Baseline)					
XM Payment	1.34	1.34	1.86	2.73	3.17	2.75
XM Revenue	5.1	4.0	4.0	4.0	4.0	4.0

Standalone	Tx payments and revenues associated with LGE Staff Case #4: High-Transfer Scenario					
XM Payment	1.35	1.51	2.12	3.03	3.37	2.86
XM Revenue	5.1	4.0	4.0	4.0	4.0	4.0

Notes

- Used wheeling cost \$ from PROSYM as the XM expense in all four cases
- For the In-MISO and In-PJM cases this PROSYM wheeling represent the cost to make sales to TVA
- Gross-up by 55% to reflect gross cost of transmission (PROSYM assumes net)
- For the In-SPP and Standalone cases this PROSYM wheeling represents the cost to make purchases from RTO
- No gross-up needed as cost is paid 100% with no return
- Calculate XM revenues based on existing projections of GFA revenue, 3rd party RTO revenues and partial return of the XM expense
- For the In-SPP and Standalone case the revenue is only the projected GFA revenue

APPENDIX B: Work Papers to Accompany Supplemental Testimony of Mathew J. Morey

	PV 2005 - 2010 (million \$ 2003)	2005	2006	2007	2008	2009	2010
MISO Misc Uplift Char	5.14	0.5	0.5	0.5	0.5	0.5	0.5
MISO Sch 21 Uplift Ch	4.79	0.81	0.83	0.86	0.89	0.91	0.93
PJM Uplift Charges	-	-	-	-	-	-	-

#	FERC Docket	IPP Owner	IPP ID	Annual RR (\$000)	MW Output	State	\$/MW
1	ER03-1396	Troy Energy		\$ 1,500	620	Ohio	\$ 2,419
2	ER04-652	First Energy S	Sumpter	\$ 3,000	340	Ohio	\$ 8,824
3	ER04-1110	Reliant	Zeeland	\$ 1,660	864	Mich	\$ 1,921
4	ER04-1075	Holland Energy		\$ 1,129	650	IL	\$ 1,737
5	ER04-717	Reliant	Orion	\$ 2,192	1310	Ohio	\$ 1,673
6	ER04-1055	Calpine	Riverside	\$ 1,525	600	Wisc	\$ 2,542
7	ER04-1059	Calpine	Rockgen	\$ 947	475	Wisc	\$ 1,994
8	ER04-992	Dynegy	Renaissance	\$ 1,309	780	Mich	\$ 1,678
Total				\$ 13,262	5639		\$ 2,352

LGE Share

2005	2006	2007	2008	2009	2010
0.81	0.83	0.86	0.89	0.91	0.93

Note
based on load ratio share

APPENDIX B: Work Papers to Accompany Supplemental Testimony of Mathew J. Morey

In RTO Case with MIDAS Prices							
RTO Case, \$000	2004 NPV	2005	2006	2007	2008	2009	2010
Native Load							
Fuel Costs	2,681,829.58	525,327.26	610,409.91	635,897.47	648,483.71	647,182.32	668,333.37
Fixed O&M Costs	286,159.11	61,619.81	61,802.84	63,856.43	67,431.06	70,128.89	73,497.19
Variable O&M Costs	98,119.74	18,642.53	19,308.17	21,239.52	22,708.39	25,648.51	31,571.71
Emission Costs	408,247.41	103,007.14	106,100.34	99,908.04	94,258.12	72,564.66	75,148.60
Market Purchase Costs	125,844.99	19,539.82	20,704.29	26,243.78	36,780.54	41,032.16	36,589.55
Wheeling Costs	-	-	-	-	-	-	-
Total Native Load Costs	3,600,200.83	728,136.56	818,325.55	847,145.24	869,661.82	856,556.54	885,140.42
Off-System Sales							
Fuel Costs	416,102.64	114,277.91	104,649.29	86,522.97	84,798.43	80,141.14	93,965.04
Variable O&M Costs	12,552.21	3,341.63	2,695.63	2,349.61	2,550.43	2,778.72	3,638.66
Emission Costs	54,331.82	18,463.79	14,812.77	11,052.25	10,586.32	7,861.55	8,660.93
Market Purchase Costs	-	-	-	-	-	-	-
Wheeling Costs	13,324.13	3,830.97	3,306.78	3,004.90	2,603.88	2,590.77	2,593.19
Total Off-System Sales Costs	496,310.80	139,914.30	125,464.47	102,929.73	100,539.06	93,372.18	108,857.83
Off-System Sales Revenue	(717,446.79)	(217,412.30)	(180,483.82)	(142,505.49)	(140,870.35)	(129,404.03)	(154,137.35)
Total Costs (Net of Revenue)	3,379,064.83	650,638.56	763,306.20	807,569.48	829,330.53	820,524.69	839,860.89
TORC Case: Low-Transfer Scenario							
RTO Case, \$000	2004 NPV	2005	2006	2007	2008	2009	2010
Native Load							
Fuel Costs	2,690,167.30	525,547.27	612,609.69	638,582.02	651,676.71	649,334.78	669,724.75
Fixed O&M Costs	286,159.11	61,619.81	61,802.84	63,856.43	67,431.06	70,128.89	73,497.19
Variable O&M Costs	98,408.58	18,905.19	19,461.31	21,287.40	22,713.61	25,568.01	31,454.70
Emission Costs	405,893.67	101,303.59	105,406.88	100,017.44	94,080.52	72,301.94	75,095.96
Market Purchase Costs	116,036.19	19,284.93	18,196.95	22,977.93	33,012.12	38,350.05	35,151.11
Wheeling Costs	9,103.85	1,339.73	1,341.83	1,861.20	2,721.49	3,167.29	2,751.51
Total Native Load Costs	3,605,768.70	728,000.53	818,819.50	848,582.42	871,635.51	858,850.96	887,675.22
Off-System Sales							
Fuel Costs	381,148.53	100,196.03	96,614.61	82,921.85	78,257.53	73,190.10	86,838.01
Variable O&M Costs	11,530.22	2,983.26	2,507.57	2,253.89	2,342.11	2,517.90	3,347.01
Emission Costs	49,270.89	15,985.82	13,581.57	10,589.78	9,701.09	7,120.19	7,990.76
Market Purchase Costs	-	-	-	-	-	-	-
Wheeling Costs	-	-	-	-	-	-	-
Total Off-System Sales Costs	441,949.64	119,165.11	112,703.75	95,765.52	90,300.73	82,828.19	98,175.78
Off-System Sales Revenue	(644,354.91)	(188,509.02)	(163,500.20)	(133,161.48)	(127,094.84)	(115,493.24)	(140,472.48)
Total Costs (Net of Revenue)	3,403,363.42	658,656.61	768,023.05	811,186.46	834,841.40	826,185.91	845,378.52
TORC Case: Baseline Scenario (Up XM) Case, \$000							
RTO Case, \$000	2004 NPV	2005	2006	2007	2008	2009	2010
Native Load							
Fuel Costs	2,689,438.19	525,487.69	612,495.13	638,548.66	651,473.97	648,981.30	669,375.31
Fixed O&M Costs	286,159.11	61,619.81	61,802.84	63,856.43	67,431.06	70,128.89	73,497.19
Variable O&M Costs	98,205.05	18,664.99	19,327.49	21,245.56	22,722.74	25,703.92	31,572.03
Emission Costs	409,344.04	102,836.14	106,317.94	100,369.08	94,919.89	72,824.03	75,348.47
Market Purchase Costs	115,995.47	19,217.69	18,183.28	22,971.59	33,110.58	38,303.02	35,148.31
Wheeling Costs	9,106.59	1,335.42	1,341.45	1,862.17	2,730.96	3,165.17	2,753.45
Total Native Load Costs	3,608,248.44	729,161.75	819,468.13	848,853.49	872,389.20	859,106.32	887,694.77
Off-System Sales							
Fuel Costs	413,387.24	113,063.24	104,187.28	86,064.84	84,447.73	79,724.35	93,279.80
Variable O&M Costs	12,472.14	3,312.26	2,682.33	2,332.88	2,535.31	2,766.34	3,617.78
Emission Costs	54,038.58	18,249.14	14,755.11	11,021.07	10,590.78	7,837.57	8,634.04
Market Purchase Costs	-	-	-	-	-	-	-
Wheeling Costs	-	-	-	-	-	-	-
Total Off-System Sales Costs	479,897.96	134,624.64	121,624.72	99,418.79	97,573.82	90,328.27	105,531.61
Off-System Sales Revenue	(706,644.09)	(213,143.66)	(178,246.83)	(140,430.71)	(139,182.54)	(127,509.06)	(152,037.81)
Total Costs (Net of Revenue)	3,381,502.32	650,642.72	762,846.02	807,841.57	830,780.48	821,925.53	841,188.57
TORC Case: High-Transfer Scenario							
RTO XM Case + Hurdle Rates, \$000	2004 NPV	2005	2006	2007	2008	2009	2010
Native Load							
Fuel Costs	2,681,854.24	525,302.74	610,520.86	635,854.82	648,412.37	647,219.83	668,355.93
Fixed O&M Costs	286,159.11	61,619.81	61,802.84	63,856.43	67,431.06	70,128.89	73,497.19
Variable O&M Costs	98,128.26	18,640.49	19,311.92	21,229.77	22,700.82	25,679.47	31,572.69
Emission Costs	408,272.28	102,921.47	106,071.56	99,890.03	94,393.52	72,613.39	75,179.32
Market Purchase Costs	125,385.45	19,483.99	20,488.01	26,185.61	36,781.95	40,795.83	36,517.70

APPENDIX B: Work Papers to Accompany Supplemental Testimony of Mathew J. Morey

Wheeling Costs	9,854.96	1,353.93	1,511.48	2,122.71	3,033.78	3,371.16	2,860.73
Total Native Load Costs	3,599,799.35	727,968.50	818,195.19	847,016.65	869,719.72	856,437.41	885,122.84
Off-System Sales							
Fuel Costs	415,341.20	114,108.87	104,452.44	86,206.68	84,688.40	80,266.13	93,593.18
Variable O&M Costs	12,541.98	3,338.17	2,693.44	2,342.08	2,548.09	2,787.47	3,632.55
Emission Costs	54,274.94	18,431.37	14,793.83	11,019.93	10,595.33	7,882.07	8,649.64
Market Purchase Costs	-	-	-	-	-	-	-
Wheeling Costs	-	-	-	-	-	-	-
Total Off-System Sales Costs	495,772.54	139,819.43	125,334.81	102,580.03	100,502.65	93,598.96	108,506.93
Off-System Sales Revenue	(719,255.70)	(217,638.80)	(180,977.61)	(142,649.07)	(141,546.80)	(130,243.20)	(154,321.51)
Total Costs (Net of Revenue)	3,376,316.18	650,149.12	762,552.39	806,947.61	828,675.57	819,793.17	839,308.26

APPENDIX B: Work Papers to Accompany Supplemental Testimony of Mathew J. Morey

MISO Base Case Annual Summary
MISO RTO Base Case

Category (negative numbers are revenues)	PV 2005 - 2010 (million \$ 2003)	2005	2006	2007	2008	2009	2010
Exit Fee	-	-	-	-	-	-	-
Administrative Costs							
<i>Implementation & Administration (Sch. 10, 16, 17)</i>	64.79	15.14	14.86	14.89	14.75	14.30	12.88
<i>Ancillary Services Market Administration</i>	0.89	-	-	0.28	0.28	0.28	0.28
<i>Other Administrative Costs</i>	-	-	-	-	-	-	-
Subtotal	65.56	15.14	14.86	15.17	15.03	14.58	13.16
Operations Costs							
Generation Costs							
<i>A&G Costs Associated with RTO Membership</i>	6.20	1.31	1.35	1.38	1.41	1.45	1.49
Native Load							
<i>Fuel Costs</i>	2,752.05	525.33	610.41	635.90	648.48	647.18	668.33
<i>Fixed O&M Costs</i>	293.56	61.62	61.80	63.86	67.43	70.13	73.50
<i>Variable O&M Costs</i>	101.19	18.64	19.31	21.24	22.71	25.65	31.57
<i>Emission Credit Costs</i>	415.16	103.01	106.10	99.91	94.26	72.56	75.15
<i>Market Purchases</i>	130.34	19.54	20.70	26.24	36.78	41.03	36.59
Subtotal	3,692.30	728.14	818.33	847.15	869.66	856.56	885.14
Off-system Sales							
<i>Fuel Costs</i>	423.63	114.28	104.65	86.52	84.80	80.14	93.97
<i>Variable O&M Costs</i>	12.85	3.34	2.70	2.35	2.55	2.78	3.64
<i>Emission Credit Costs</i>	54.83	18.46	14.81	11.05	10.59	7.86	8.66
<i>Market Purchases</i>	-	-	-	-	-	-	-
Subtotal	491.30	136.08	122.16	99.92	97.94	90.78	106.26
Transmission System Operation Costs							
<i>A&G Costs Associated with RTO Membership</i>	6.20	1.31	1.35	1.38	1.41	1.45	1.49
<i>Reliability Coordinator and OASIS Services</i>	-	-	-	-	-	-	-
Subtotal	6.20	1.31	1.35	1.38	1.41	1.45	1.49
Transmission Usage Costs							
<i>Transmission Payments</i>	24.60	6.96	6.02	5.45	4.73	4.71	4.71
<i>Transmission Congestion Payments</i>	78.56	16.65	17.06	17.49	17.93	18.37	18.83
Subtotal	103.16	23.61	23.08	22.94	22.65	23.08	23.54
Uplift Charges							
<i>Schedule 21 Uplift Charges</i>	3.86	0.81	0.83	0.86	0.89	0.91	0.93
<i>Miscellaneous Uplift Costs</i>	2.23	0.50	0.50	0.50	0.50	0.50	0.50
Subtotal	6.09	1.31	1.33	1.36	1.39	1.41	1.43
Legal, Regulatory & Transaction Costs	3.78	0.80	0.82	0.84	0.86	0.88	0.91
Total Costs	4,374.59	907.71	983.27	990.14	1,010.36	990.20	1,033.42
Revenues (note revenues will be negative numbers)							
Transmission Revenues							
<i>Transmission Revenues</i>	(46.82)	(12.10)	(10.50)	(10.30)	(9.90)	(9.90)	(9.90)
Subtotal	(46.82)	(12.10)	(10.50)	(10.30)	(9.90)	(9.90)	(9.90)
Off-system Sales Revenue	(728.60)	(217.41)	(180.48)	(142.51)	(140.87)	(129.40)	(154.14)
FTRs							
<i>FTR Revenues (as offset to congestion payments)</i>	(74.64)	(15.81)	(16.21)	(16.61)	(17.03)	(17.46)	(17.89)
<i>Share of Net Revenue from FTR Auction</i>	(8.91)	(2.00)	(2.00)	(2.00)	(2.00)	(2.00)	(2.00)
Subtotal	(83.54)	(17.81)	(18.21)	(18.61)	(19.03)	(19.46)	(19.89)
Miscellaneous Revenues							
Total Revenues	(858.96)	(247.33)	(209.19)	(171.42)	(169.80)	(158.76)	(183.93)
Net Cost (Revenue)	3,515.63	660.38	774.08	818.72	840.56	831.44	849.49

all figures on this summary page would be pv to 2003 for the study period 2005-2010
discount rate will be 7.0 %
inflation rate assumed to be 2.5%

APPENDIX B: Work Papers to Accompany Supplemental Testimony of Mathew J. Morey

Change Case 2 Annual Summary
PJM RTO Case

Category (negative numbers are revenues)	PV 2005 - 2010 (million \$ 2003)	2005	2006	2007	2008	2009	2010
Exit Fee	24.81	28.40	-	-	-	-	-
Administrative Costs							
<i>Implementation & Administration</i>	75.59	17.12	16.45	15.99	16.79	17.45	18.32
<i>Ancillary Services Market Administration</i>	-	-	-	-	-	-	-
<i>Other Administrative Costs</i>	-	-	-	-	-	-	-
Subtotal	75.59	17.12	16.45	15.99	16.79	17.45	18.32
Operations Costs							
Generation Costs							
<i>A&G Costs Associated with RTO Membership</i>	6.20	1.31	1.35	1.38	1.41	1.45	1.49
Native Load							
<i>Fuel Costs</i>	2,752.05	525.33	610.41	635.90	648.48	647.18	668.33
<i>Fixed O&M Costs</i>	293.56	61.62	61.80	63.86	67.43	70.13	73.50
<i>Variable O&M Costs</i>	101.19	18.64	19.31	21.24	22.71	25.65	31.57
<i>Emission Credit Costs</i>	415.16	103.01	106.10	99.91	94.26	72.56	75.15
<i>Market Purchases</i>	130.34	19.54	20.70	26.24	36.78	41.03	36.59
Subtotal	3,692.30	728.14	818.33	847.15	869.66	856.56	885.14
Off-system Sales							
<i>Fuel Costs</i>	423.63	114.28	104.65	86.52	84.80	80.14	93.97
<i>Variable O&M Costs</i>	12.85	3.34	2.70	2.35	2.55	2.78	3.64
<i>Emission Credit Costs</i>	54.83	18.46	14.81	11.05	10.59	7.86	8.66
<i>Market Purchases</i>	-	-	-	-	-	-	-
Subtotal	491.30	136.08	122.16	99.92	97.94	90.78	106.26
Transmission System Operation Costs							
<i>A&G Costs Associated with RTO Membership</i>	6.20	1.31	1.35	1.38	1.41	1.45	1.49
<i>Reliability Coordinator and OASIS Services</i>	-	-	-	-	-	-	-
Subtotal	6.20	1.31	1.35	1.38	1.41	1.45	1.49
Transmission Usage Costs							
<i>Transmission Payments</i>	24.60	6.96	6.02	5.45	4.73	4.71	4.71
<i>Transmission Congestion Payments</i>	78.56	16.65	17.06	17.49	17.93	18.37	18.83
Subtotal	103.16	23.61	23.08	22.94	22.65	23.08	23.54
Uplift Charges							
<i>Schedule 21 Uplift Charges(MISO Case Only)</i>	-	-	-	-	-	-	-
<i>Miscellaneous Uplift Costs</i>	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-
Legal, Regulatory & Transaction Costs	3.78	0.80	0.82	0.84	0.86	0.88	0.91
Total Costs	4,403.33	936.78	983.52	989.60	1,010.73	991.65	1,037.15
Revenues (note revenues will be negative numbers)							
Transmission Revenues							
<i>Transmission Revenues</i>	(46.82)	(12.10)	(10.50)	(10.30)	(9.90)	(9.90)	(9.90)
Subtotal	(46.82)	(12.10)	(10.50)	(10.30)	(9.90)	(9.90)	(9.90)
Off-system Sales Revenue	(728.60)	(217.41)	(180.48)	(142.51)	(140.87)	(129.40)	(154.14)
FTRs							
<i>FTR Revenues (us offset to congestion payments)</i>	(74.64)	(15.81)	(16.21)	(16.61)	(17.03)	(17.46)	(17.89)
<i>Share of Net Revenue from FTR Auction</i>	(10.49)	(2.33)	(2.34)	(2.35)	(2.37)	(2.38)	(2.39)
Subtotal	(85.13)	(18.14)	(18.54)	(18.97)	(19.40)	(19.84)	(20.28)
Miscellaneous Revenues							
Total Revenues	(860.54)	(247.65)	(209.53)	(171.77)	(170.17)	(159.14)	(184.32)
Net Cost (Revenue) Including Exit Fee	3,542.79	689.13	774.00	817.83	840.56	832.52	852.83
Net Cost (Revenue) Excluding Exit Fee	3,517.98	660.73	774.00	817.83	840.56	832.52	852.83

all figures on this summary page would be pv to 2003 for the study period 2005-2010
discount rate will be 7.0 %
inflation rate assumed to be 2.5%

APPENDIX B: Work Papers to Accompany Supplemental Testimony of Mathew J. Morey

Change Case 2 Annual Summary SPP RTO Case

Category (negative numbers are revenues)	PV 2005 - 2010 (million \$ 2003)	2005	2006	2007	2008	2009	2010
Exit Fee	24.81	28.40	-	-	-	-	-
Administrative Costs							
<i>Implementation & Administration</i>	30.44	6.43	6.48	6.62	6.95	7.22	7.58
<i>Ancillary Services Market Administration</i>	-	-	-	-	-	-	-
<i>Other Administrative Costs</i>	0.03	0.01	0.01	0.01	0.01	0.01	0.01
Subtotal	30.47	6.43	6.49	6.62	6.95	7.23	7.59
Operations Costs							
Generation Costs							
<i>A&G Costs Associated with SPP RTO Membership</i>	4.21	0.89	0.92	0.94	0.96	0.99	1.01
Native Load							
<i>Fuel Costs</i>	2,759.89	525.49	612.50	638.55	651.47	648.98	669.38
<i>Fixed O&M Costs</i>	293.56	61.62	61.80	63.86	67.43	70.13	73.50
<i>Variable O&M Costs</i>	101.28	18.66	19.33	21.25	22.72	25.70	31.57
<i>Emission Credit Costs</i>	416.30	102.84	106.32	100.37	94.92	72.82	75.35
<i>Market Purchases</i>	120.17	19.22	18.18	22.97	33.11	38.30	35.15
Subtotal	3,691.21	727.83	818.13	846.99	869.66	855.94	884.94
Off-system Sales							
<i>Fuel Costs</i>	420.88	113.06	104.19	86.06	84.45	79.72	93.28
<i>Variable O&M Costs</i>	12.77	3.31	2.68	2.33	2.54	2.77	3.62
<i>Emission Credit Costs</i>	54.54	18.25	14.76	11.02	10.59	7.84	8.63
<i>Market Purchases</i>	-	-	-	-	-	-	-
Subtotal	488.19	134.62	121.62	99.42	97.57	90.33	105.53
Transmission System Operation Costs							
<i>A&G Costs Associated with SPP RTO Membership</i>	3.80	0.42	0.92	0.94	0.96	0.99	1.01
<i>Reliability Coordinator and OASIS Services</i>	-	-	-	-	-	-	-
Subtotal	3.80	0.42	0.92	0.94	0.96	0.99	1.01
Transmission Usage Costs							
<i>Transmission Payments</i>	9.45	1.34	1.34	1.86	2.72	3.17	2.75
<i>Transmission Congestion Payments</i>	-	-	-	-	-	-	-
Subtotal	9.45	1.34	1.34	1.86	2.72	3.17	2.75
Uplift Charges							
<i>Schedule 21 Uplift Charges(MISO Case Only)</i>	-	-	-	-	-	-	-
<i>Miscellaneous Uplift Costs</i>	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-
Legal, Regulatory & Transaction Costs	2.83	0.60	0.62	0.63	0.65	0.66	0.68
Total Costs	4,254.98	900.54	950.03	957.40	979.48	959.30	1,003.51
Revenues (note revenues will be negative numbers)							
Transmission Revenues							
<i>Transmission Revenues</i>	(18.78)	(5.10)	(4.00)	(4.00)	(4.00)	(4.00)	(4.00)
Subtotal	(18.78)	(5.10)	(4.00)	(4.00)	(4.00)	(4.00)	(4.00)
Off-system Sales Revenue	(717.69)	(213.14)	(178.25)	(140.43)	(139.18)	(127.51)	(152.04)
FTRs							
<i>FTR Revenues (as offset to congestion payments)</i>	-	-	-	-	-	-	-
<i>Share of Net Revenue from FTR Auction</i>	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-
Miscellaneous Revenues							
Subtotal	-	-	-	-	-	-	-
Total Revenues	(736.47)	(218.24)	(182.25)	(144.43)	(143.18)	(131.51)	(156.04)
Net Cost (Revenue) Including Exit Fee	3,518.52	682.30	767.78	812.97	836.29	827.79	847.48
Net Cost (Revenue) Excluding Exit Fee	3,493.71	653.89	767.78	812.97	836.29	827.79	847.48

all figures on this summary page would be pv to 2003 for the study period 2005-2010
discount rate will be 7.0 %
inflation rate assumed to be 2.5%

APPENDIX B: Work Papers to Accompany Supplemental Testimony of Mathew J. Morey

Change Case 3 Annual Summary
TORC Baseline Case

Category (negative numbers are revenues)	PV 2005 - 2010 (million \$ 2003)	2005	2006	2007	2008	2009	2010
Exit Fee	24.81	28.40	-	-	-	-	-
Administrative Costs							
<i>Implementation & Administration</i>	-	-	-	-	-	-	-
<i>Ancillary Services Market Administration</i>	-	-	-	-	-	-	-
<i>Other Administrative Costs</i>	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-
Operations Costs							
Generation Costs							
<i>A&G Costs Associated with RTO Status</i>	4.21	0.89	0.92	0.94	0.96	0.99	1.01
Native Load							
<i>Fuel Costs</i>	2,759.89	525.49	612.50	638.55	651.47	648.98	669.38
<i>Fixed O&M Costs</i>	293.56	61.62	61.80	63.86	67.43	70.13	73.50
<i>Variable O&M Costs</i>	101.28	18.66	19.33	21.25	22.72	25.70	31.57
<i>Emission Credit Costs</i>	416.30	102.84	106.32	100.37	94.92	72.82	75.35
<i>Market Purchases</i>	120.17	19.22	18.18	22.97	33.11	38.30	35.15
Subtotal	3,691.21	727.83	818.13	846.99	869.66	855.94	884.94
Off-system Sales							
<i>Fuel Costs</i>	420.88	113.06	104.19	86.06	84.45	79.72	93.28
<i>Variable O&M Costs</i>	12.77	3.31	2.68	2.33	2.54	2.77	3.62
<i>Emission Credit Costs</i>	54.54	18.25	14.76	11.02	10.59	7.84	8.63
<i>Market Purchases</i>	-	-	-	-	-	-	-
Subtotal	488.19	134.62	121.62	99.42	97.57	90.33	105.53
Transmission System Operation Costs							
<i>A&G Costs Associated with RTO Status</i>	3.80	0.42	0.92	0.94	0.96	0.99	1.01
<i>Reliability Coordinator and OASIS Services</i>	2.48	0.53	0.54	0.55	0.57	0.58	0.59
Subtotal	6.28	0.95	1.45	1.49	1.53	1.57	1.60
Transmission Usage Costs							
<i>Transmission Payments</i>	9.45	1.34	1.34	1.86	2.73	3.17	2.75
<i>Transmission Congestion Payments</i>	-	-	-	-	-	-	-
Subtotal	9.45	1.34	1.34	1.86	2.73	3.17	2.75
Uplift Charges							
<i>Schedule 21 Uplift Charges(MISO Case Only)</i>	-	-	-	-	-	-	-
<i>Miscellaneous Uplift Costs</i>	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-
Legal, Regulatory & Transaction Costs	1.89	0.40	0.41	0.42	0.43	0.44	0.45
Total Costs	4,226.05	894.43	943.87	951.12	972.88	952.43	996.29
Revenues (note revenues will be negative numbers)							
Transmission Revenues							
<i>Transmission Revenues</i>	(18.78)	(5.10)	(4.00)	(4.00)	(4.00)	(4.00)	(4.00)
Subtotal	(18.78)	(5.10)	(4.00)	(4.00)	(4.00)	(4.00)	(4.00)
Off-system Sales Revenue	(717.69)	(213.14)	(178.25)	(140.43)	(139.18)	(127.51)	(152.04)
FTRs							
<i>FTR Revenues (as offset to congestion payments)</i>	-	-	-	-	-	-	-
<i>Share of Net Revenue from FTR Auction</i>	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-
Miscellaneous Revenues							
<i>Miscellaneous Revenues</i>	(736.47)	(218.24)	(182.25)	(144.43)	(143.18)	(131.51)	(156.04)
Total Revenues	(736.47)	(218.24)	(182.25)	(144.43)	(143.18)	(131.51)	(156.04)
Net Cost (Revenue) Including Exit Fee	3,489.59	676.19	761.63	806.69	829.70	820.92	840.26
Net Cost (Revenue) Excluding Exit Fee	3,464.78	647.78	761.63	806.69	829.70	820.92	840.26

all figures on this summary page would be pv to 2003 for the study period 2005-2010

discount rate will be 7.0 %

inflation rate assumed to be 2.5%

APPENDIX B: Work Papers to Accompany Supplemental Testimony of Mathew J. Morey

Change Case 3 Annual Summary: Sensitivity Case 1
TORC Case: Low-Transfer Scenario

Category (negative numbers are revenues)	PV 2005 - 2010 (million \$ 2003)	2005	2006	2007	2008	2009	2010
Exit Fee	24.81	28.40	-	-	-	-	-
Administrative Costs							
<i>Implementation & Administration</i>	-	-	-	-	-	-	-
<i>Ancillary Services Market Administration</i>	-	-	-	-	-	-	-
<i>Other Administrative Costs</i>	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-
Operations Costs							
Generation Costs							
<i>A&G Costs Associated with RTO Status</i>	4.21	0.89	0.92	0.94	0.96	0.99	1.01
Native Load							
<i>Fuel Costs</i>	2,760.66	525.55	612.61	638.58	651.68	649.33	669.72
<i>Fixed O&M Costs</i>	293.56	61.62	61.80	63.86	67.43	70.13	73.50
<i>Variable O&M Costs</i>	101.46	18.91	19.46	21.29	22.71	25.57	31.45
<i>Emission Credit Costs</i>	412.85	101.30	105.41	100.02	94.08	72.30	75.10
<i>Market Purchases</i>	120.21	19.28	18.20	22.98	33.01	38.35	35.15
Subtotal	3,688.75	726.66	817.48	846.72	868.91	855.68	884.92
Off-system Sales							
<i>Fuel Costs</i>	388.29	100.20	96.61	82.92	78.26	73.19	86.84
<i>Variable O&M Costs</i>	11.80	2.98	2.51	2.25	2.34	2.52	3.35
<i>Emission Credit Costs</i>	49.77	15.99	13.58	10.59	9.70	7.12	7.99
<i>Market Purchases</i>	-	-	-	-	-	-	-
Subtotal	449.86	119.17	112.70	95.77	90.30	82.83	98.18
Transmission System Operation Costs							
<i>A&G Costs Associated with RTO Status</i>	3.80	0.42	0.92	0.94	0.96	0.99	1.01
<i>Reliability Coordinator and OASIS Services</i>	2.48	0.53	0.54	0.55	0.57	0.58	0.59
Subtotal	6.28	0.95	1.45	1.49	1.53	1.57	1.60
Transmission Usage Costs							
<i>Transmission Payments</i>	9.45	1.34	1.34	1.86	2.72	3.17	2.75
<i>Transmission Congestion Payments</i>	-	-	-	-	-	-	-
Subtotal	9.45	1.34	1.34	1.86	2.72	3.17	2.75
Uplift Charges							
<i>Schedule 21 Uplift Charges(MISO Case Only)</i>	-	-	-	-	-	-	-
<i>Miscellaneous Uplift Costs</i>	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-
Legal, Regulatory & Transaction Costs	1.89	0.40	0.41	0.42	0.43	0.44	0.45
Total Costs	4,185.25	877.81	934.30	947.20	964.86	944.67	988.92
Revenues (note revenues will be negative numbers)							
Transmission Revenues							
<i>Transmission Revenues</i>	(18.78)	(5.10)	(4.00)	(4.00)	(4.00)	(4.00)	(4.00)
Subtotal	(18.78)	(5.10)	(4.00)	(4.00)	(4.00)	(4.00)	(4.00)
Off-system Sales Revenue	(654.76)	(188.51)	(163.50)	(133.16)	(127.09)	(115.49)	(140.47)
FTRs							
<i>FTR Revenues (as offset to congestion payments)</i>	-	-	-	-	-	-	-
<i>Share of Net Revenue from FTR Auction</i>	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-
Miscellaneous Revenues							
Subtotal	(673.54)	(193.61)	(167.50)	(137.16)	(131.09)	(119.49)	(144.47)
Net Cost (Revenue) Including Exit Fee	3,511.71	684.20	766.80	810.04	833.76	825.18	844.45
Net Cost (Revenue) Excluding Exit Fee	3,486.90	655.80	766.80	810.04	833.76	825.18	844.45

all figures on this summary page would be pv to 2003 for the study period 2005-2010

discount rate will be 7.0 %

inflation rate assumed to be 2.5%

APPENDIX B: Work Papers to Accompany Supplemental Testimony of Mathew J. Morey

Change Case 3 Annual Summary: Sensitivity Case 2
TORC Case: High Transfer Scenario

Category (negative numbers are revenues)	PV 2005 - 2010 (million \$ 2003)	2005	2006	2007	2008	2009	2010
Exit Fee	24.81	28.40	-	-	-	-	-
Administrative Costs							
<i>Implementation & Administration</i>	-	-	-	-	-	-	-
<i>Ancillary Services Market Administration</i>	-	-	-	-	-	-	-
<i>Other Administrative Costs</i>	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-
Operations Costs							
Generation Costs							
<i>A&G Costs Associated with RTO Status</i>	4.21	0.89	0.92	0.94	0.96	0.99	1.01
Native Load							
<i>Fuel Costs</i>	2,752.07	525.30	610.52	635.85	648.41	647.22	668.36
<i>Fixed O&M Costs</i>	293.56	61.62	61.80	63.86	67.43	70.13	73.50
<i>Variable O&M Costs</i>	101.20	18.64	19.31	21.23	22.70	25.68	31.57
<i>Emission Credit Costs</i>	415.19	102.92	106.07	99.89	94.39	72.61	75.18
<i>Market Purchases</i>	129.87	19.48	20.49	26.19	36.78	40.80	36.52
Subtotal	3,691.90	727.97	818.20	847.02	869.72	856.44	885.12
Off-system Sales							
<i>Fuel Costs</i>	422.85	114.11	104.45	86.21	84.69	80.27	93.59
<i>Variable O&M Costs</i>	12.84	3.34	2.69	2.34	2.55	2.79	3.63
<i>Emission Credit Costs</i>	54.77	18.43	14.79	11.02	10.60	7.88	8.65
<i>Market Purchases</i>	-	-	-	-	-	-	-
Subtotal	490.46	135.88	121.94	99.57	97.83	90.94	105.88
Transmission System Operation Costs							
<i>A&G Costs Associated with RTO Status</i>	3.80	0.42	0.92	0.94	0.96	0.99	1.01
<i>Reliability Coordinator and OASIS Services</i>	2.48	0.53	0.54	0.55	0.57	0.58	0.59
Subtotal	6.28	0.95	1.45	1.49	1.53	1.57	1.60
Transmission Usage Costs							
<i>Transmission Payments</i>	10.23	1.35	1.51	2.12	3.03	3.37	2.86
<i>Transmission Congestion Payments</i>	-	-	-	-	-	-	-
Subtotal	10.23	1.35	1.51	2.12	3.03	3.37	2.86
Uplift Charges							
<i>Schedule 21 Uplift Charges (MISO Case Only)</i>	-	-	-	-	-	-	-
<i>Miscellaneous Uplift Costs</i>	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-
Legal, Regulatory & Transaction Costs	1.89	0.40	0.41	0.42	0.43	0.44	0.45
Total Costs	4,229.78	895.84	944.43	951.56	973.51	953.74	996.93
Revenues (note revenues will be negative numbers)							
Transmission Revenues							
<i>Through and Out Revenues</i>	-	-	-	-	-	-	-
<i>Transmission Revenues</i>	(18.78)	(5.10)	(4.00)	(4.00)	(4.00)	(4.00)	(4.00)
Subtotal	(18.78)	(5.10)	(4.00)	(4.00)	(4.00)	(4.00)	(4.00)
Off-system Sales Revenue	(730.46)	(217.64)	(180.98)	(142.65)	(141.55)	(130.24)	(154.32)
FTRs							
<i>FTR Revenues (as offset to congestion payment)</i>	-	-	-	-	-	-	-
<i>Share of Net Revenue from FTR Auction</i>	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-
Miscellaneous Revenues							
Total Revenues	(749.24)	(222.74)	(184.98)	(146.65)	(145.55)	(134.24)	(158.32)
Net Cost (Revenue) Including Exit Fee	3,480.54	673.10	759.45	804.91	827.96	819.49	838.61
Net Cost (Revenue) Excluding Exit Fee	3,455.73	644.70	759.45	804.91	827.96	819.49	838.61

all figures on this summary page would be pv to 2003 for the study period 2005-2010
discount rate will be 7.0 %
inflation rate assumed to be 2.5%

APPENDIX B: Work Papers to Accompany Supplemental Testimony of Mathew J. Morey

Present Value Summary
(all numbers are PV to 2003, 2005-2010, million \$)

Category (negative numbers are revenues)	Base Case: MISO RTO	PJM RTO Case	SPP RTO Case	TORC Baseline Scenario
Exit Fee	-	24.81	24.81	24.81
Administrative Costs				
Implementation & Administration Charges	64.79	75.59	30.44	-
Ancillary Services Market Administration	0.89	-	-	-
Other Administrative Costs	-	-	0.03	-
Subtotal	65.56	75.59	30.47	-
Operations Costs				
Generation Costs				
A&G Costs Associated with RTO Membership Status	6.20	6.20	4.21	4.21
Native Load				
Fuel Costs	2,752.05	2,752.05	2,759.89	2,759.89
Fixed O&M Costs	293.56	293.56	293.56	293.56
Variable O&M Costs	101.19	101.19	101.28	101.28
Emission Credit Costs	415.16	415.16	416.30	416.30
Market Purchases	130.34	130.34	120.17	120.17
Subtotal	3,692.30	3,692.30	3,691.21	3,691.21
Off-system Sales				
Fuel Costs	423.63	423.63	420.88	420.88
Variable O&M Costs	12.85	12.85	12.77	12.77
Emission Credit Costs	54.83	54.83	54.54	54.54
Market Purchases	-	-	-	-
Subtotal	491.30	491.30	488.19	488.19
Transmission System Operation Costs				
A&G Costs Associated with RTO Membership	6.20	6.20	3.80	3.80
Reliability Coordinator and OASIS Services	-	-	-	2.48
Subtotal	6.20	6.20	3.80	6.28
Transmission Usage Costs				
Transmission Payments	24.60	24.60	9.45	9.45
Transmission Congestion Payments	78.56	78.56	-	-

APPENDIX B: Work Papers to Accompany Supplemental Testimony of Mathew J. Morey

Subtotal	103.16	103.16	9.45	9.45
Uplift Charges				
<i>Schedule 21 Uplift Charges</i>	3.86	-	-	-
<i>Miscellaneous Uplift Costs</i>	2.23	-	-	-
Subtotal	6.09	-	-	-
Legal, Regulatory & Transaction Costs	3.78	3.78	2.83	1.89
Total Costs	4,374.59	4,403.33	4,254.98	4,226.05
Revenues (note revenues will be negative numbers)				
Transmission Revenues				
<i>Transmission Revenues</i>	(46.82)	(46.82)	(18.78)	(18.78)
Subtotal	(46.82)	(46.82)	(18.78)	(18.78)
Off-system Sales Revenue	(728.60)	(728.60)	(717.69)	(717.69)
FTRs				
<i>FTR Revenues (as offset to congestion payments)</i>	(74.64)	(74.64)	-	-
<i>Share of Net Revenue from FTR Auction</i>	(8.91)	(10.49)	-	-
Subtotal	(83.54)	(85.13)	-	-
Miscellaneous Revenues	-	-	-	-
Total Revenues	(858.96)	(860.54)	(736.47)	(736.47)
Net Cost (Revenue) Including Exit Fee	3,515.63	3,542.79	3,518.52	3,489.59
Net Cost (Revenue) Excluding Exit Fee	3,515.63	3,517.98	3,493.71	3,464.78

APPENDIX B: Work Papers to Accompany Supplemental Testimony of Mathew J. Morey

Present Value Summary: Differences						
Category (negative numbers are benefits of MISO RTO)	MISO Base Case minus PJM Case	MISO Base Case minus SPP Case	MISO Base Case minus TORC Baseline Scenario	PJM minus TORC Baseline Scenario	SPP minus Baseline Scenario	
Exit Fee	(24.81)	(24.81)	(24.81)	-	-	-
Administrative Costs						
Implementation & Administration (Sch. 10, 16, 17)	(10.80)	34.34	64.79	75.59	30.44	
Ancillary Services Market Administration	0.89	0.89	0.89	-	-	
Other Administrative Costs	-	(0.03)	0.00	-	0.03	
Subtotal	(10.03)	35.09	65.56	75.59	30.47	
Operations Costs						
Generation Costs						
A&G Costs Associated with RTO Membership Status	-	1.98	1.98	1.98	-	
Native Load						
Fuel Costs	-	(7.84)	(7.84)	(7.84)	-	
Fixed O&M Costs	-	-	0.00	-	-	
Variable O&M Costs	-	(0.09)	(0.09)	(0.09)	-	
Emission Credit Costs	-	(1.15)	(1.15)	(1.15)	-	
Market Purchases	-	10.17	10.17	10.17	-	
Subtotal	-	1.09	1.09	1.09	-	
Off-system Sales						
Fuel Costs	-	2.74	2.74	2.74	-	
Variable O&M Costs	-	0.08	0.08	0.08	-	
Emission Credit Costs	-	0.29	0.29	0.29	-	
Market Purchases	-	-	0.00	-	-	
Subtotal	-	3.11	3.11	3.11	-	
Transmission System Operation Costs						
A&G Costs Associated with RTO Membership	-	2.40	2.40	2.40	-	
Reliability Coordinator and OASIS Services	-	-	(2.48)	(2.48)	(2.48)	
Subtotal	-	2.40	(0.08)	(0.08)	(2.48)	
Transmission Usage Costs						
Transmission Payments	-	15.15	15.14	15.14	(0.00)	
Transmission Congestion Payments	-	78.56	78.56	78.56	-	

APPENDIX B: Work Papers to Accompany Supplemental Testimony of Mathew J. Morey

Subtotal	-	93.71	93.71	93.71	(0.00)
Uplift Charges					
<i>Schedule 21 Uplift Charges</i>	3.86	3.86	3.86	-	-
<i>Miscellaneous Uplift Costs</i>	2.23	2.23	2.23	-	-
Subtotal	6.09	6.09	6.09	-	-
Legal, Regulatory & Transaction Costs	-	0.94	1.89	1.89	0.94
Total Costs	(28.75)	119.61	148.53	177.28	28.93
Revenues (note revenues will be negative numbers)					
Transmission Revenues					
<i>Transmission Revenues</i>	-	(28.04)	(28.04)	(28.04)	-
Subtotal	-	(28.04)	(28.04)	(28.04)	-
Off-system Sales Revenue	-	(10.91)	(10.91)	(10.91)	-
FTRs					
<i>FTR Revenues (as offset to congestion payments)</i>	-	(74.64)	(74.64)	(74.64)	-
<i>Share of Net Revenue from FTR Auction</i>	1.58	(8.91)	(8.91)	(10.49)	-
Subtotal	1.58	(83.54)	(83.54)	(85.13)	-
Miscellaneous Revenues	-	-	-	-	-
Total Revenues	1.58	(122.49)	(122.49)	(124.08)	-
Net Cost (Benefit) of MISO RTO Including Exit Fee	(27.16)	(2.89)	26.04	53.20	28.93
Net Cost (Benefit) of MISO RTO Excluding Exit Fee	(2.35)	21.92	50.85	53.20	28.93

APPENDIX B: Work Papers to Accompany Supplemental Testimony of Mathew J. Morey

Present Value Summary: Additional Scenarios				
Category (negative numbers are revenues)	TORC Baseline Scenario	TORC: Low-Transfer Scenario	TORC: High-Transfer Scenario	
Exit Fee	24.81	24.81	24.81	24.81
Administrative Costs				
<i>Implementation & Administration (Sch. 10, 16, 17)</i>	-	-	-	-
<i>Ancillary Services Market Administration</i>	-	-	-	-
<i>Other Administrative Costs</i>	-	-	-	-
Subtotal	-	-	-	-
Operations Costs				
Generation Costs				
<i>A&G Costs Associated with RTO Membership Status</i>	4.21	4.21	4.21	4.21
Native Load				
<i>Fuel Costs</i>	2,759.89	2,760.66	2,752.07	
<i>Fixed O&M Costs</i>	293.56	293.56	293.56	
<i>Variable O&M Costs</i>	101.28	101.46	101.20	
<i>Emission Credit Costs</i>	416.30	412.85	415.19	
<i>Market Purchases</i>	120.17	120.21	129.87	
Subtotal	3,691.21	3,688.75	3,691.90	
Off-system Sales				
<i>Fuel Costs</i>	420.88	388.29	422.85	
<i>Variable O&M Costs</i>	12.77	11.80	12.84	
<i>Emission Credit Costs</i>	54.54	49.77	54.77	
<i>Market Purchases</i>	-	-	-	
Subtotal	488.19	449.86	490.46	
Transmission System Operation Costs				
<i>A&G Costs Associated with RTO Membership</i>	3.80	3.80	3.80	3.80
<i>Reliability Coordinator and OASIS Services</i>	2.48	2.48	2.48	2.48
Subtotal	6.28	6.28	6.28	6.28
Transmission Usage Costs				
<i>Transmission Payments</i>	9.45	9.45	10.23	
<i>Transmission Congestion Payments</i>	-	-	-	-

APPENDIX B: Work Papers to Accompany Supplemental Testimony of Mathew J. Morey

Subtotal	9.45	9.45	10.23
Uplift Charges			
<i>Schedule 21 Uplift Charges</i>	-	-	-
<i>Miscellaneous Uplift Costs</i>	-	-	-
Subtotal	-	-	-
Legal, Regulatory & Transaction Costs			
	1.89	1.89	1.89
	-	-	-
Total Costs	4,226.05	4,185.25	4,229.78
Revenues (note revenues will be negative numbers)			
Transmission Revenues			
<i>Transmission Revenues</i>	(18.78)	(18.78)	(18.78)
Subtotal	(18.78)	(18.78)	(18.78)
Off-system Sales Revenue			
	(717.69)	(654.76)	(730.46)
	-	-	-
FTRs			
<i>FTR Revenues (as offset to congestion payments)</i>	-	-	-
<i>Share of Net Revenue from FTR Auction</i>	-	-	-
Subtotal	-	-	-
Miscellaneous Revenues			
	(736.47)	(673.54)	(749.24)
Total Revenues	3,489.59	3,511.71	3,480.54
Net Cost (Revenue) Including Exit Fee	3,464.78	3,486.90	3,455.73
Net Cost (Revenue) Excluding Exit Fee			

APPENDIX B: Work Papers to Accompany Supplemental Testimony of Mathew J. Morey

Present Value Summary: Differences for Alt Scenarios

Category (negative numbers are benefits of MISO RTO)	MISO Base Case minus TORC Baseline Scenario	MISO Base Case minus TORC Low-Transfer Scenario	MISO Base Case minus TORC High-Transfer Scenario
Exit Fee	(24.81)	(24.81)	(24.81)
Administrative Costs			
Implementation & Administration (Sch. 10, 16, 17)	64.79	64.79	64.79
Ancillary Services Market Administration	0.89	0.89	0.89
Other Administrative Costs	-	-	-
Subtotal	65.56	65.56	65.56
Operations Costs			
Generation Costs			
A&G Costs Associated with RTO Membership	1.98	1.98	1.98
Native Load			
Fuel Costs	(7.84)	(8.61)	(0.02)
Fixed O&M Costs	-	-	-
Variable O&M Costs	(0.09)	(0.27)	(0.01)
Emission Credit Costs	(1.15)	2.31	(0.04)
Market Purchases	10.17	10.13	0.47
Subtotal	1.09	3.55	0.40
Off-system Sales			
Fuel Costs	2.74	35.34	0.78
Variable O&M Costs	0.08	1.04	0.01
Emission Credit Costs	0.29	5.06	0.06
Market Purchases	-	-	-
Subtotal	3.11	41.45	0.84
Transmission System Operation Costs			
A&G Costs Associated with RTO Membership	2.40	2.40	2.40
Reliability Coordinator and OASIS Services	(2.48)	(2.48)	(2.48)
Subtotal	(0.08)	(0.08)	(0.08)
Transmission Usage Costs			
Transmission Payments	15.14	15.15	14.37
Transmission Congestion Payments	78.56	78.56	78.56

APPENDIX B: Work Papers to Accompany Supplemental Testimony of Mathew J. Morey

Subtotal		93.71	93.71	92.93
Uplift Charges				
<i>Schedule 21 Uplift Charges</i>		3.86	3.86	3.86
<i>Miscellaneous Uplift Costs</i>		2.23	2.23	2.23
Subtotal		6.09	6.09	6.09
Legal, Regulatory & Transaction Costs		1.89	1.89	1.89
Total Costs		148.53	189.34	144.80
Revenues (note revenues will be negative numbers)				
Transmission Revenues				
<i>Transmission Revenues</i>		(28.04)	(28.04)	(28.04)
Subtotal		(28.04)	(28.04)	(28.04)
Off-system Sales Revenue		(10.91)	(73.84)	1.87
FTRs				
<i>FTR Revenues (as offset to congestion payments)</i>		(74.64)	(74.64)	(74.64)
<i>Share of Net Revenue from FTR Auction</i>		(8.91)	(8.91)	(8.91)
Subtotal		(83.54)	(83.54)	(83.54)
Miscellaneous Revenues		-	-	-
Total Revenues		(122.49)	(185.42)	(109.72)
Net Cost (Benefit) of MISO RTO w/ Exit Fee		26.04	3.92	35.09
Net Cost (Benefit) of MISO Membership w/o Exit Fee		50.85	28.73	59.90

APPENDIX B: Work Papers to Accompany Supplemental Testimony of Mathew J. Morey

Short Present Value Summary					
Category (negative numbers are revenues)	MISO Base Case	PJM Case	SPP Case	TORC Baseline Scenario	
Exit Fee	-	24.81	24.81	24.81	24.81
Administrative Costs	65.56	75.59	30.47	-	-
Operations Costs					
A&G Costs Associated with RTO Membership Status	12.40	12.40	8.02	8.02	8.02
Generation Costs					
Native Load	3,692.30	3,692.30	3,691.21	3,691.21	3,691.21
Off-system Sales	491.30	491.30	488.19	488.19	488.19
Transmission System Operation Costs	-	-	-	-	2.48
Transmission Usage Costs	103.16	103.16	9.45	9.45	9.45
Uplift Charges	6.09	-	-	-	-
Legal, Regulatory & Transaction Costs	3.78	3.78	2.83	1.89	1.89
Total Costs	4,374.59	4,403.33	4,254.98	4,226.05	4,226.05
Revenues (revenues will be negative numbers)					
Transmission Revenues	(46.82)	(46.82)	(18.78)	(18.78)	(18.78)
Off-system Sales Revenue	(728.60)	(728.60)	(717.69)	(717.69)	(717.69)
FTRs	(83.54)	(85.13)	-	-	-
Total Revenues	(858.96)	(860.54)	(736.47)	(736.47)	(736.47)
Net Cost (Revenue) with Exit Fee	3515.63	3542.79	3518.52	3489.59	3489.59
Net Cost (Revenue) without Exit Fee	3,515.63	3,517.98	3,493.71	3,464.78	3,464.78

APPENDIX B: Work Papers to Accompany Supplemental Testimony of Mathew J. Morey

Short Summary of Present Value Differences						
Category (negative numbers are benefits)	MISO Base Case minus PJM Case	MISO Base Case minus SPP Case	MISO Base Case minus TORC Baseline Scenario	PJM Case minus TORC Baseline Scenario	SPP Case minus TORC Baseline Scenario	
Exit Fee	(24.81)	(24.81)	(24.81)	-	-	-
Administrative Costs	(10.03)	35.09	65.56	75.59	30.47	
Operations Costs			0.00			
A&G Costs Associated with RTO Membership Status	-	4.38	4.38	4.38	-	
Generation Costs			0.00			
Native Load	-	1.09	1.09	1.09	-	
Off-system Sales	-	3.11	3.11	3.11	-	
Transmission System Operation Costs	-	-	(2.48)	(2.48)	(2.48)	
Transmission Usage Costs	-	93.71	93.71	93.71	(0.00)	
Uplift Charges	6.09	6.09	6.09	-	-	
Legal, Regulatory & Transaction Costs	-	0.94	1.89	1.89	0.94	
Total Costs	(28.75)	119.61	148.53	177.28	28.93	
			0.00			
Revenues (revenues will be negative numbers)			0.00			
Transmission Revenues	-	(28.04)	(28.04)	(28.04)	-	
Off-system Sales Revenue	-	(10.91)	(10.91)	(10.91)	-	
FTRs	1.58	(83.54)	(83.54)	(85.13)	-	
Total Revenues	1.58	(122.49)	(122.49)	(124.08)	-	
Net Cost (Benefit) of the MISO Option Including Exit Fee	(27.16)	(2.89)	26.04	53.20	28.93	
Net Cost (Benefit) of the MISO Option Excluding Exit Fee	(2.35)	21.92	50.85	53.20	28.93	

APPENDIX B: Work Papers to Accompany Supplemental Testimony of Mathew J. Morey

Short Present Value Summary			
Category (negative numbers are revenues)	TORC Baseline Scenario	TORC Low-Transfer Scenario	TORC High-Transfer Scenario
Exit Fee	24.81	24.81	24.81
Administrative Costs	-	-	-
Operations Costs			
A&G Costs Associated with RTO Membership Status	8.02	8.02	8.02
Generation Costs			
Native Load	3,691.21	3,688.75	3,691.90
Off-system Sales	488.19	449.86	490.46
Transmission System Operation Costs	2.48	2.48	2.48
Transmission Usage Costs	9.45	9.45	10.23
Uplift Charges	-	-	-
Legal, Regulatory & Transaction Costs	1.89	1.89	1.89
Total Costs	4,226.05	4,185.25	4,229.78
Revenues (revenues will be negative numbers)			
Transmission Revenues	(18.78)	(18.78)	(18.78)
Off-system Sales Revenue	(717.69)	(654.76)	(730.46)
FTRs	-	-	-
Total Revenues	(736.47)	(673.54)	(749.24)
Net Cost (Revenue) Including Exit Fee	3,489.59	3,511.71	3,480.54
Net Cost (Revenue) Excluding Exit Fee	3,514.40	3,536.52	3,505.35

APPENDIX B: Work Papers to Accompany Supplemental Testimony of Mathew J. Morey

Short Summary of Present Value Differences			
Category (negative numbers are benefits)	MISO Base Case minus TORC Baseline Scenario	MISO Base Case minus TORC Low-Transfer Scenario	MISO Base Case minus TORC High-Transfer Scenario
Exit Fee	(24.81)	(24.81)	(24.81)
Administrative Costs	65.56	65.56	65.56
Operations Costs			
A&G Costs Associated with RTO Membership Status	4.38	4.38	4.38
Generation Costs			
Native Load	1.09	3.55	0.40
Off-system Sales	3.11	41.45	0.84
Transmission System Operation Costs	(2.48)	(2.48)	(2.48)
Transmission Usage Costs	93.71	93.71	92.93
Uplift Charges	6.09	6.09	6.09
Legal, Regulatory & Transaction Costs	1.89	1.89	1.89
Total Costs	148.53	189.34	144.80
Revenues (revenues will be negative numbers)			
Transmission Revenues	(28.04)	(28.04)	(28.04)
Off-system Sales Revenue	(10.91)	(73.84)	1.87
FTRs	(83.54)	(83.54)	(83.54)
Total Revenues	(122.49)	(185.42)	(109.72)
Net Cost (Benefit) of MISO Option Including Exit Fee	26.04	3.92	35.09
Net Cost (Benefit) of MISO Option Excluding Exit Fee	50.85	28.73	59.90

APPENDIX B: Work Papers to Accompany Supplemental Testimony of Mathew J. Morey

Simple Payback Period Estimates
MISO Base

Year	Standalone Baseline			Standalone Low Transfer		
	Recurring	Non- Recurring	Break Even Point	Recurring	Non- Recurring	Break Even Point
2005	660.38	647.78	24.81	655.80	24.81	(20.22)
2006	774.08	761.63		766.80		(12.94)
2007	818.72	806.69		810.04		(4.26)
2008	840.56	829.70		833.76		2.54
2009	831.44	820.92		825.18		8.80
2010	849.49	840.26		844.45		13.84
PV to 2003	3,515.63	3,464.78		3,486.90		

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Standalone High Transfer			PJM RTO Case			SPP RTO Case		
Recurring	Non- Recurring	Break Even Point	Recurring	Non- Recurring	Break Even Point	Recurring	Non- Recurring	Break Even Point
644.70	24.81	(9.13)	660.73	24.81	(25.15)	653.89	24.81	(18.32)
759.45		5.50	774.00		(25.07)	767.78		(12.02)
804.91		19.32	817.83		(24.18)	812.97		(6.27)
827.96		31.91	840.56		(24.18)	836.29		(2.01)
819.49		43.86	832.52		(25.26)	827.79		1.64
838.61		54.74	852.83		(28.60)	847.48		3.65

Exit Fee (nominal dollars)

24.81

24.81

APPENDIX B: Work Papers to Accompany Supplemental Testimony of Mathew J. Morey

Extended Study Period Question
MISO Base Case Annual Summary
MISO RTO Base Case

every category held constant at 2010 values for 2011 to 2019

Category (negative numbers are revenues)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Exit Fee	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Administrative Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Implementation & Administration (Sch. 10, 16, 17)	\$117.04	14.86	14.89	14.75	14.30	12.88	12.88	12.88	12.88	12.88	12.88	12.88	12.88	12.88	12.88
Auxiliary Services Market Administration	\$2.19	-	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
Other Administrative Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal	\$118.95	15.14	14.86	15.03	14.58	13.16	13.16	13.16	13.16	13.16	13.16	13.16	13.16	13.16	13.16
Operations Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Generation Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A&G Costs Associated with RTO Membership	\$12.23	1.31	1.35	1.41	1.45	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49
Native Load	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fuel Costs	\$5,463.72	525.33	610.41	635.90	648.48	647.18	668.33	668.33	668.33	668.33	668.33	668.33	668.33	668.33	668.33
Fixed O&M Costs	\$591.77	61.82	61.80	63.86	67.43	70.13	73.50	73.50	73.50	73.50	73.50	73.50	73.50	73.50	73.50
Variable O&M Costs	\$229.29	18.64	19.51	21.24	22.71	23.65	31.57	31.57	31.57	31.57	31.57	31.57	31.57	31.57	31.57
Emission Credit Costs	\$720.08	103.01	106.10	99.91	94.26	72.56	75.15	75.15	75.15	75.15	75.15	75.15	75.15	75.15	75.15
Market Purchases	\$278.80	19.54	20.70	26.24	36.78	41.03	36.59	36.59	36.59	36.59	36.59	36.59	36.59	36.59	36.59
Subtotal	\$7,283.63	728.14	818.33	847.15	869.66	885.14	885.14	885.14	885.14	885.14	885.14	885.14	885.14	885.14	885.14
Off-system Sales	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fuel Costs	\$804.88	114.28	104.65	86.52	84.80	80.14	93.97	93.97	93.97	93.97	93.97	93.97	93.97	93.97	93.97
Variable O&M Costs	\$27.61	3.34	2.70	2.35	2.55	2.78	3.64	3.64	3.64	3.64	3.64	3.64	3.64	3.64	3.64
Emission Credit Costs	\$89.97	18.46	14.81	11.05	10.39	7.86	8.66	8.66	8.66	8.66	8.66	8.66	8.66	8.66	8.66
Market Purchases	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal	\$922.46	136.08	122.16	99.92	97.94	106.26	106.26	106.26	106.26	106.26	106.26	106.26	106.26	106.26	106.26
Transmission System Operation Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A&G Costs Associated with RTO Membership	\$12.23	1.31	1.35	1.41	1.45	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49
Reliability Coordinator and O&S Services	\$0.00	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal	\$12.23	1.31	1.35	1.41	1.45	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49	1.49
Transmission Usage Costs	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Transmission Payments	\$43.70	6.96	6.02	5.45	4.73	4.71	4.71	4.71	4.71	4.71	4.71	4.71	4.71	4.71	4.71
Transmission Congestion Payments	\$154.98	16.65	17.06	17.49	17.93	18.37	18.83	18.83	18.83	18.83	18.83	18.83	18.83	18.83	18.83
Subtotal	\$198.68	23.61	23.08	22.94	22.65	23.54	23.54	23.54	23.54	23.54	23.54	23.54	23.54	23.54	23.54
Uplift Charges	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Schedule 21 Uplift Charges	\$7.64	0.81	0.83	0.86	0.89	0.91	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Miscellaneous Uplift Costs	\$4.26	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Subtotal	\$11.90	1.31	1.33	1.36	1.39	1.41	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43	1.43
Legal, Regulatory, & Transaction Costs	\$0.80	0.80	0.82	0.84	0.86	0.88	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Total Costs	\$8,567.53	907.71	983.27	990.14	1,010.36	990.20	1,033.42	1,033.42	1,033.42	1,033.42	1,033.42	1,033.42	1,033.42	1,033.42	1,033.42
Revenues (note revenues will be negative numbers)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Transmission Revenues	(\$86.99)	(12.10)	(10.50)	(10.30)	(9.90)	(9.90)	(9.90)	(9.90)	(9.90)	(9.90)	(9.90)	(9.90)	(9.90)	(9.90)	(9.90)
Subtotal	(\$86.99)	(12.10)	(10.50)	(10.30)	(9.90)	(9.90)	(9.90)	(9.90)	(9.90)	(9.90)	(9.90)	(9.90)	(9.90)	(9.90)	(9.90)
Off-system Sale Revenue	(\$1,355.99)	(217.41)	(180.46)	(142.51)	(140.87)	(129.40)	(154.14)	(154.14)	(154.14)	(154.14)	(154.14)	(154.14)	(154.14)	(154.14)	(154.14)
FTRs	(\$147.23)	(15.91)	(15.21)	(15.03)	(14.46)	(13.89)	(13.89)	(13.89)	(13.89)	(13.89)	(13.89)	(13.89)	(13.89)	(13.89)	(13.89)
FTR Revenues (as offset to congestion payments)	(\$17.02)	(2.00)	(2.00)	(2.00)	(2.00)	(2.00)	(2.00)	(2.00)	(2.00)	(2.00)	(2.00)	(2.00)	(2.00)	(2.00)	(2.00)
Share of Net Revenues from FTR Auction	(\$164.25)	(17.81)	(18.21)	(19.03)	(19.46)	(19.89)	(19.89)	(19.89)	(19.89)	(19.89)	(19.89)	(19.89)	(19.89)	(19.89)	(19.89)
Subtotal	(\$1,684.47)	(212.42)	(171.42)	(169.80)	(158.76)	(163.93)	(163.93)	(163.93)	(163.93)	(163.93)	(163.93)	(163.93)	(163.93)	(163.93)	(163.93)
Miscellaneous Revenues	(\$1,605.23)	(247.33)	(209.19)	(171.42)	(158.76)	(163.93)	(163.93)	(163.93)	(163.93)	(163.93)	(163.93)	(163.93)	(163.93)	(163.93)	(163.93)
Total Revenues	\$6,962.30	660.38	774.08	818.72	840.56	831.44	849.49	849.49	849.49	849.49	849.49	849.49	849.49	849.49	849.49
Net Cost (Revenue)	\$1,605.23	247.33	209.19	171.42	158.76	163.93	163.93	163.93	163.93	163.93	163.93	163.93	163.93	163.93	163.93

APPENDIX B: Work Papers to Accompany Supplemental Testimony of Mathew J. Morey

TORC Case: Baseline Scenario												
Category (negative numbers are revenues)												
Exit Fee	\$24.81	28.40	-	-	-	-	-	-	-	-	-	-
Administrative Costs												
Implementation & Administration (Sch. 10, 16, 17)												
Auxiliary Services Market Administration												
Other Administrative Costs												
Subtotal												
Operations Costs												
Generation Costs												
AdG Costs Associated with RTO Membership	\$8.31	0.89	0.92	0.94	0.96	0.99	1.01	1.01	1.01	1.01	1.01	1.01
Native Load												
Fuel Costs	\$5,475.79	525.49	612.50	638.55	651.47	648.98	669.38	669.38	669.38	669.38	669.38	669.38
Fixed O&M Costs	\$591.77	61.62	61.80	63.86	67.43	70.13	73.50	73.50	73.50	73.50	73.50	73.50
Variable O&M Costs	\$228.38	18.66	19.33	21.25	22.72	25.70	31.57	31.57	31.57	31.57	31.57	31.57
Emission Credit Costs	\$722.02	102.84	109.32	100.37	94.92	72.82	75.35	75.35	75.35	75.35	75.35	75.35
Market Purchases	\$262.78	19.22	18.18	22.97	33.11	38.30	35.15	35.15	35.15	35.15	35.15	35.15
Subtotal	\$7,281.74	727.83	818.13	846.99	869.66	855.94	884.94	884.94	884.94	884.94	884.94	884.94
Off-system Sales												
Fuel Costs	\$799.35	113.06	104.19	86.06	84.45	79.72	93.28	93.28	93.28	93.28	93.28	93.28
Variable O&M Costs	\$27.44	3.31	2.68	2.33	2.54	2.77	3.62	3.62	3.62	3.62	3.62	3.62
Emission Credit Costs	\$89.57	18.25	14.76	11.02	10.59	7.84	8.63	8.63	8.63	8.63	8.63	8.63
Market Purchases	\$0.00	-	-	-	-	-	-	-	-	-	-	-
Subtotal	\$916.37	134.62	121.62	99.42	97.57	90.33	105.53	105.53	105.53	105.53	105.53	105.53
Transmission System Operation Costs												
AdG Costs Associated with RTO Membership	\$7.90	0.42	0.92	0.94	0.96	0.99	1.01	1.01	1.01	1.01	1.01	1.01
Reliability Coordinator and O&MS Services	\$4.89	0.53	0.54	0.55	0.57	0.58	0.59	0.59	0.59	0.59	0.59	0.59
Subtotal	\$12.79	0.95	1.45	1.49	1.53	1.57	1.60	1.60	1.60	1.60	1.60	1.60
Transmission Usage Costs												
Transmission Payments	\$20.62	1.34	1.34	1.86	2.73	3.17	2.75	2.75	2.75	2.75	2.75	2.75
Transmission Congestion Payments												
Subtotal	\$20.62	1.34	1.34	1.86	2.73	3.17	2.75	2.75	2.75	2.75	2.75	2.75
Uplift Charges												
Schedule 31 Uplift Charges												
Miscellaneous Uplift Costs												
Subtotal												
Legal, Regulatory & Transaction Costs	\$3.72	0.40	0.41	0.42	0.43	0.44	0.45	0.45	0.45	0.45	0.45	0.45
Total Costs	\$8,269.37	894.43	943.87	951.12	972.88	952.43	996.29	996.29	996.29	996.29	996.29	996.29
Revenues (note revenues will be negative numbers)												
Transmission Revenues												
Transmission Revenues	(\$335.01)	(5.10)	(4.00)	(4.00)	(4.00)	(4.00)	(4.00)	(4.00)	(4.00)	(4.00)	(4.00)	(4.00)
Subtotal	(\$335.01)	(5.10)	(4.00)	(4.00)	(4.00)	(4.00)	(4.00)	(4.00)	(4.00)	(4.00)	(4.00)	(4.00)
Off-system Sales Revenue	(\$1,334.55)	(213.14)	(178.25)	(149.43)	(139.18)	(127.51)	(152.04)	(152.04)	(152.04)	(152.04)	(152.04)	(152.04)
FTRs												
FTR Revenues (as offset to congestion payments)												
Share of Net Revenue from FTR Auction												
Subtotal												
Miscellaneous Revenues	(\$1,369.57)	(218.24)	(182.25)	(144.43)	(143.18)	(131.51)	(156.04)	(156.04)	(156.04)	(156.04)	(156.04)	(156.04)
Total Revenues	\$6,998.81	676.19	761.63	806.69	829.70	820.92	840.26	840.26	840.26	840.26	840.26	840.26
Net Cost (Revenue)												
	\$63.49											
	\$88.30											

Difference Between Net Cost MISO and Net Cost Std
 Net Cost MISO minus Net Cost TORC w/o Exit Fee

